Starting a Model Railway—Special 8 page feature!

meccano magazine

October

1s.6d.

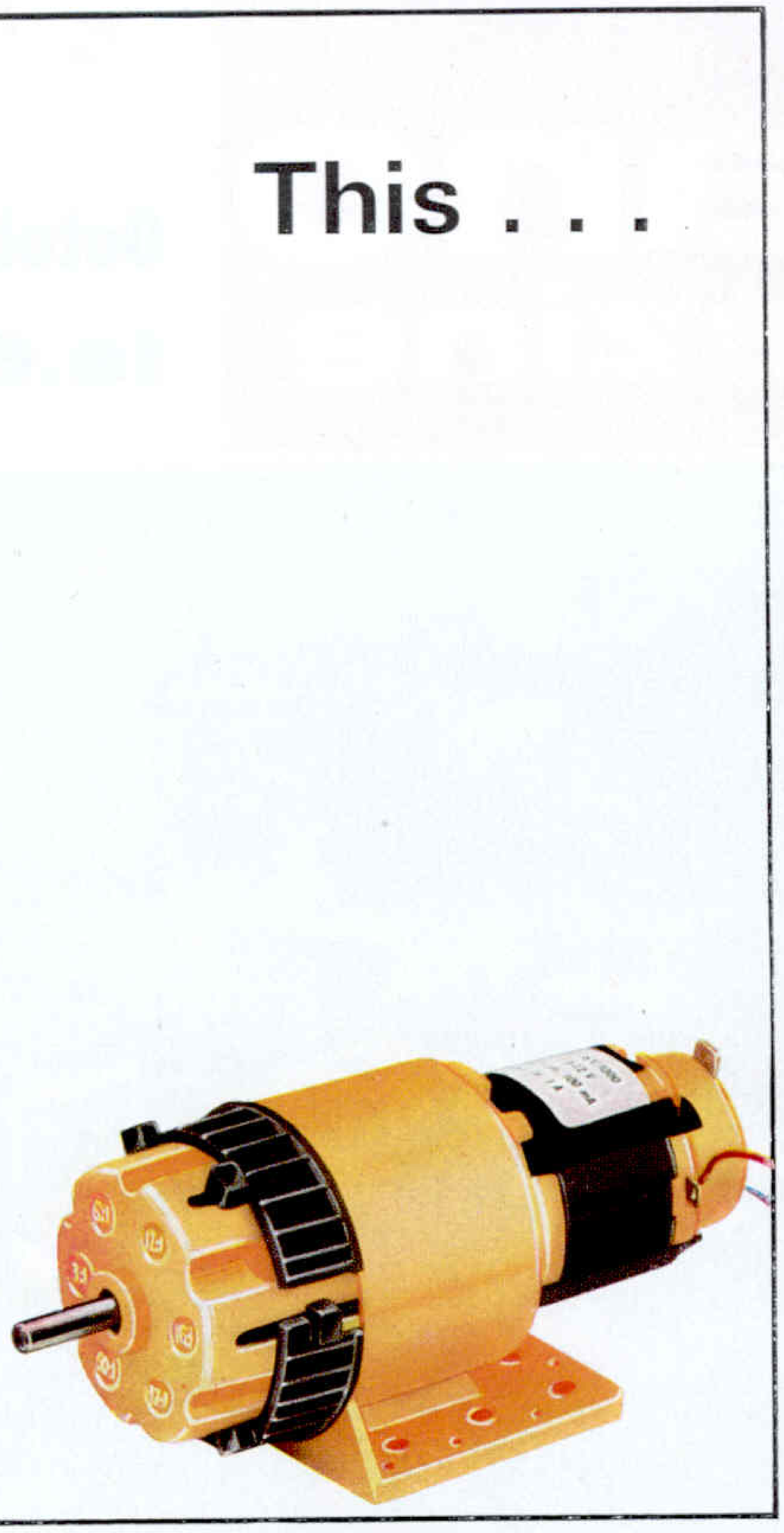
the practical boy's hobbies magazine

1965

IN THIS ISSUE

- Russia's Giant Planes
- Full size free flight model plans

This . . .



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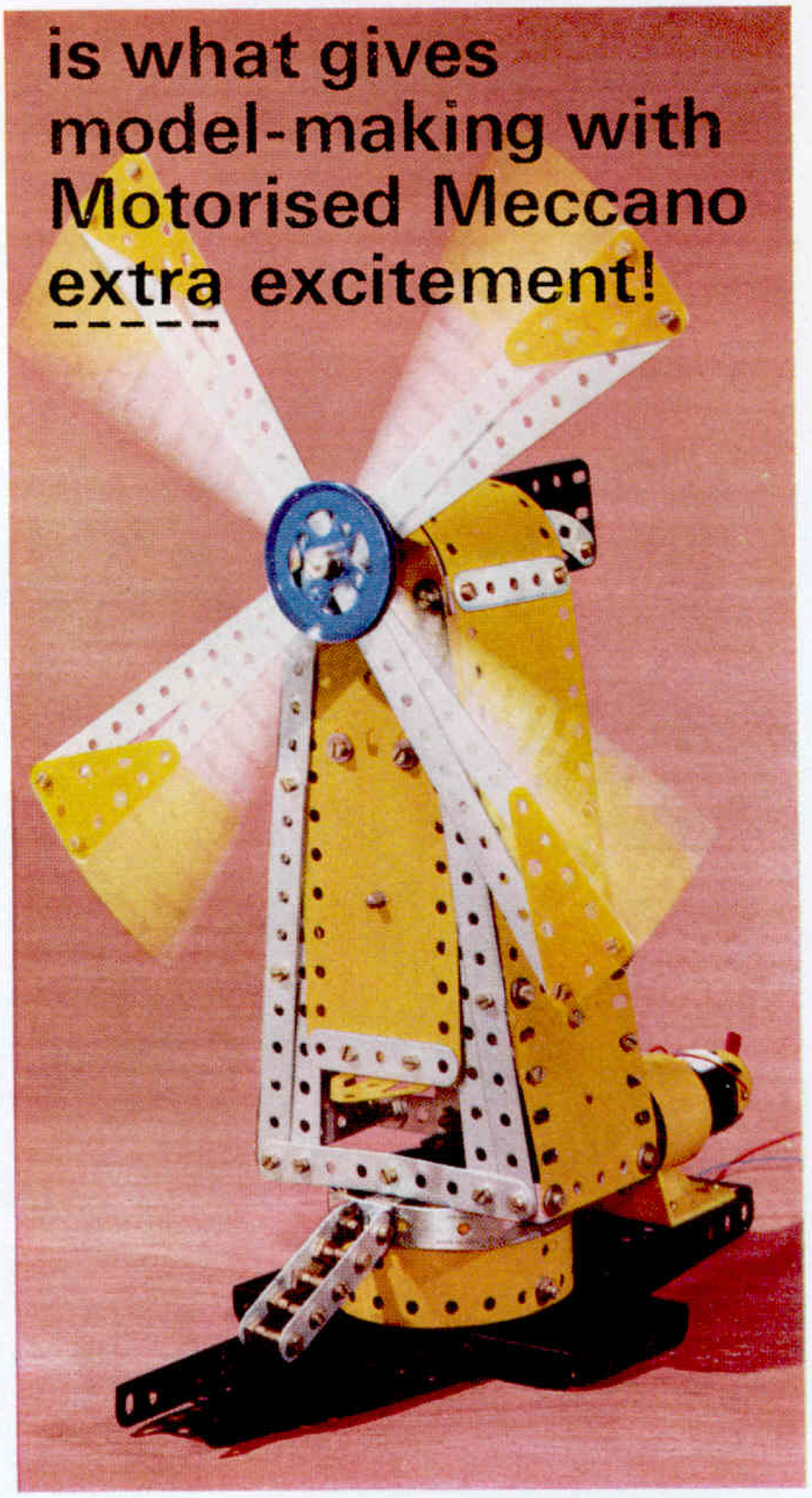

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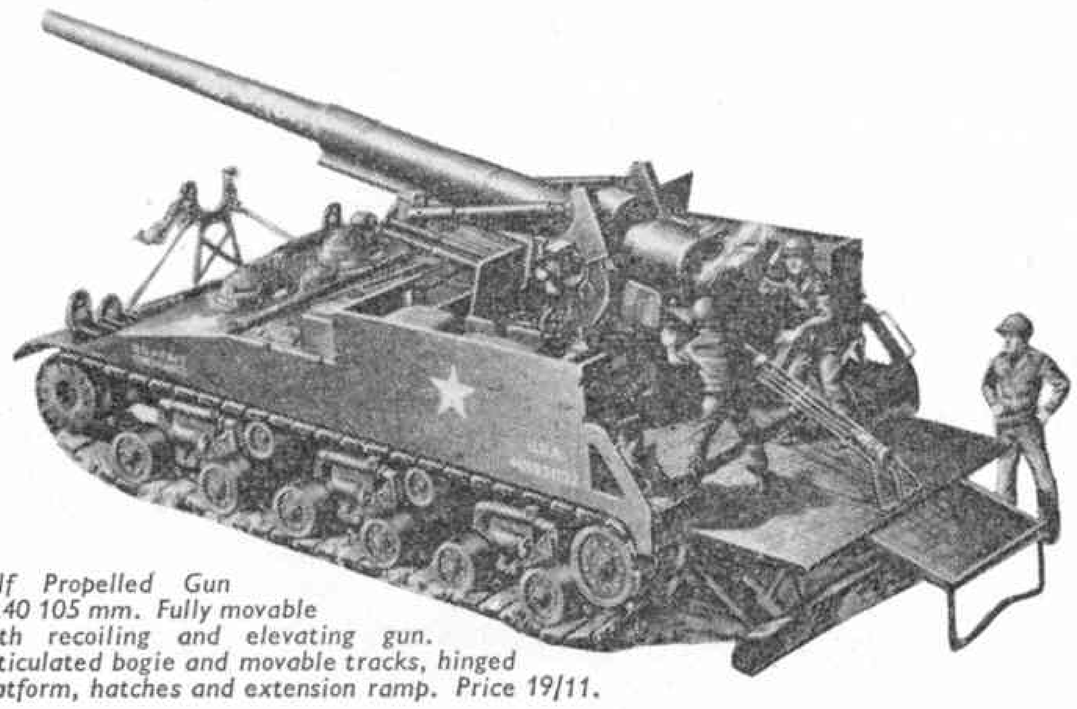

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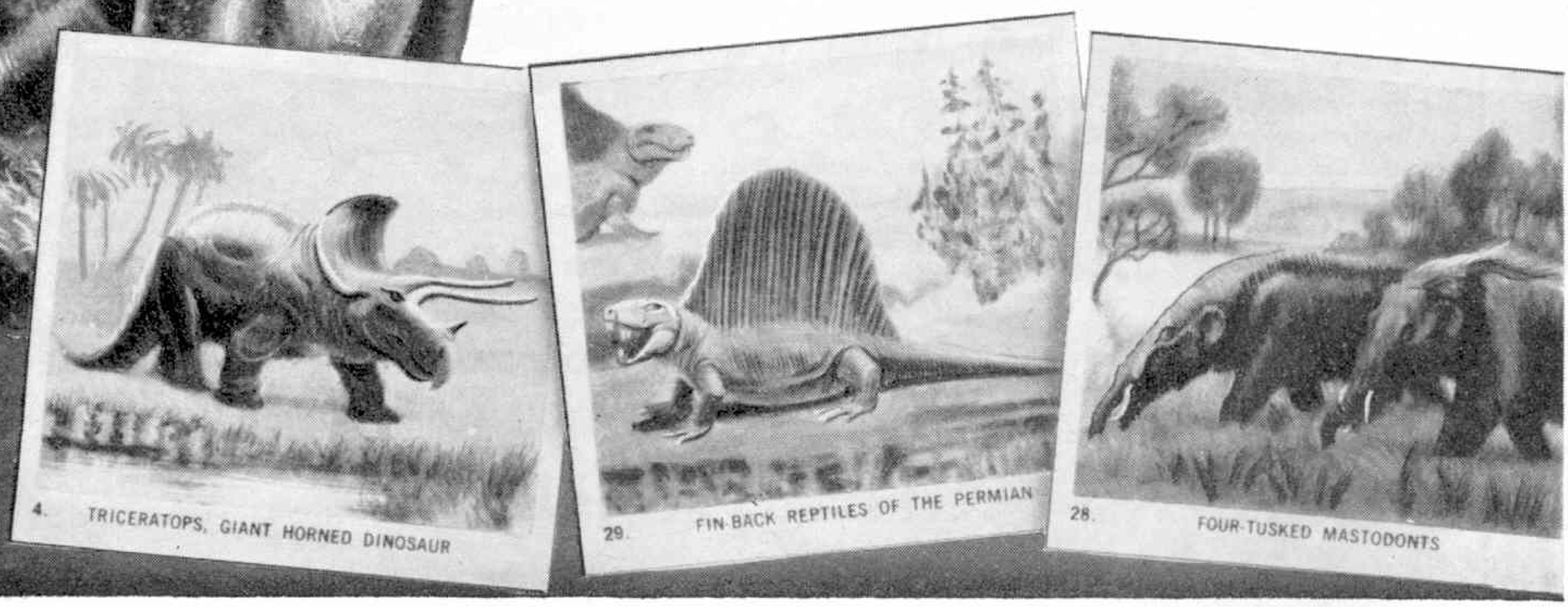

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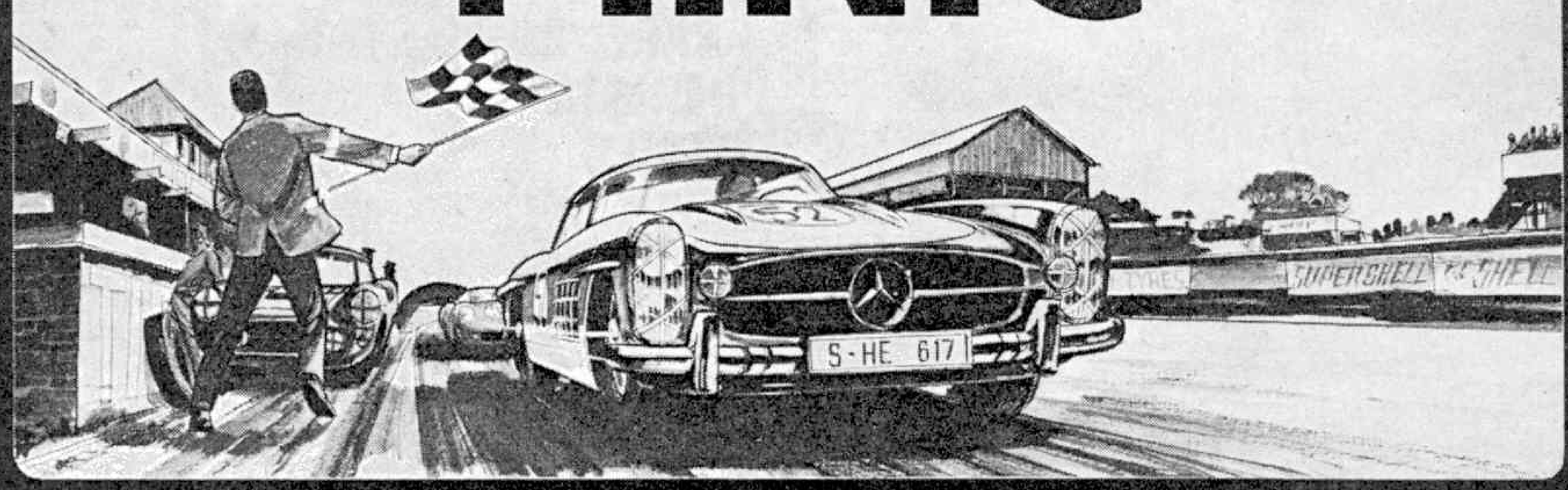

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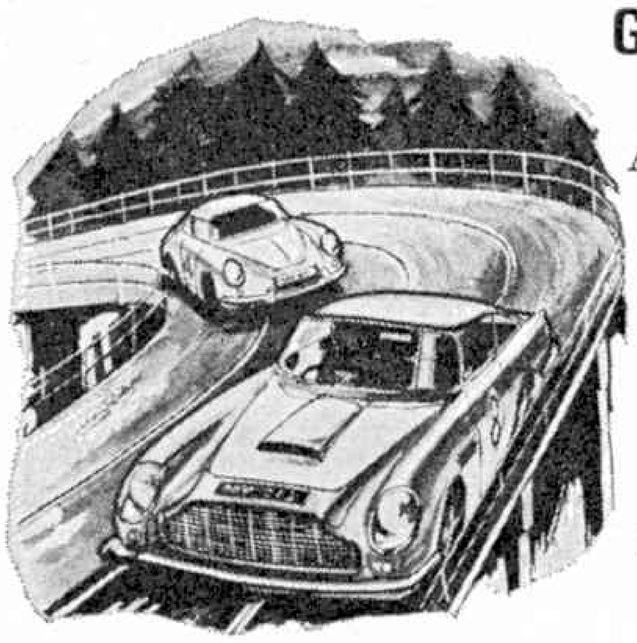

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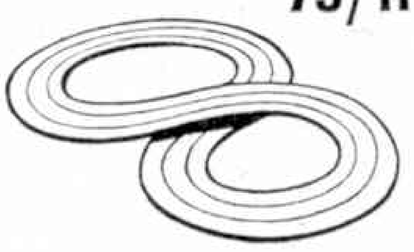

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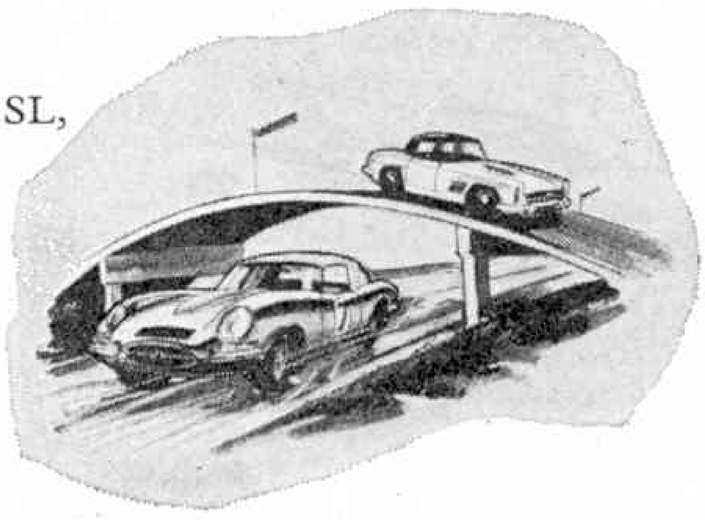

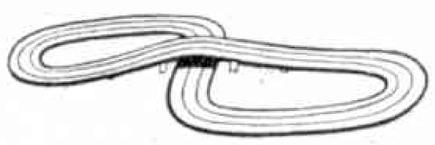

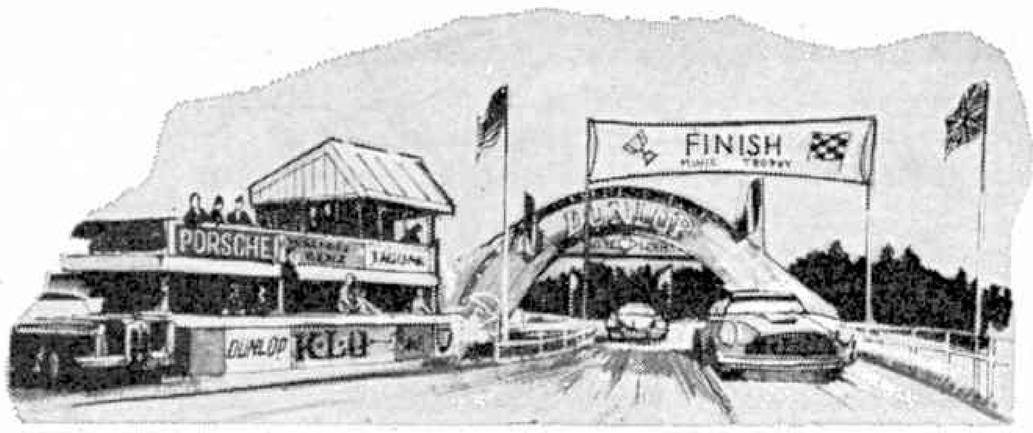

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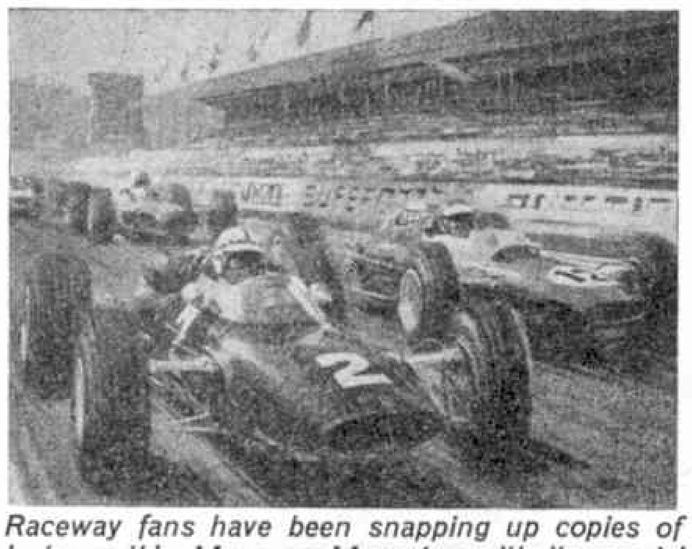
October 1965 · Vol. 50 · No. 10 · Monthly

AEROMODELLING □ RADIO □ ELECTRONICS □ CAMPING □ CYCLING □ STAMPS □ FISHING



Raceway fans have been snapping up copies of last month's Meccano Magazine with its special supplement covering the latest developments in model car racing.
The magnificent full colour Michael Turner cover painting (reproduced above) is just right for framing too! We would like to thank VICTORY INDUSTRIES (RACEWAYS) LTD., for allowing us to use this fine artwork which is also the subject of their latest Box Top

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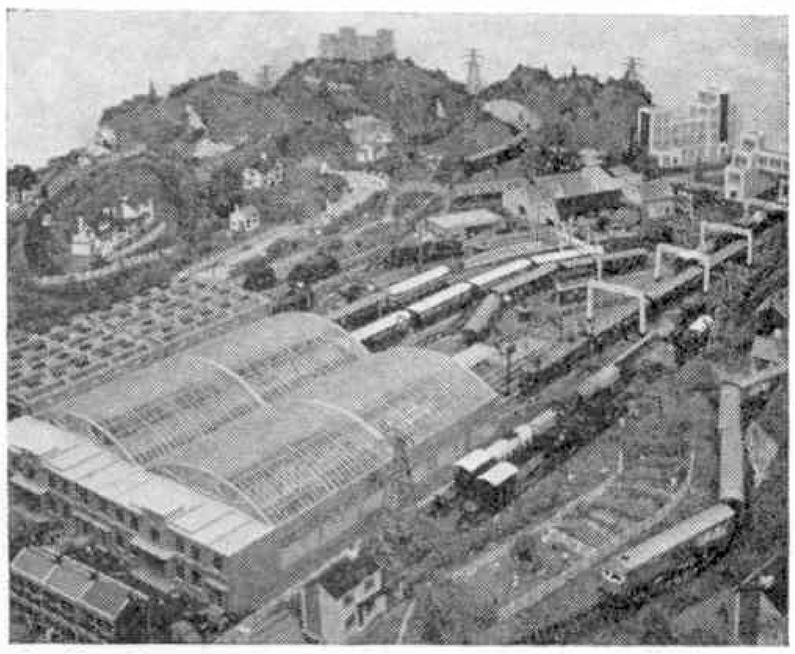


On the Cover:
The almost limitless scope offered by the Tri-ang Hornby system is impressively emphasised by this month's cover picture. Notice how well the Model Land and Arkitex buildings blend with the scenic setting

With the autumn now upon us, we turn again to our indoor hobbies. Out come those dream plans for super racing circuits, world-beating model planes, and of course the proposed main line extension to the railway that will take that new express loco which is to be in your sheds in about three months time!

Talking of railways, how on earth do you choose the *right* railway equipment from the ever increasing number of excellent systems now available? Yes, I know it's difficult, but in this and the next two issues we are presenting a really special three-part round-up of all that's best in railway modelling.

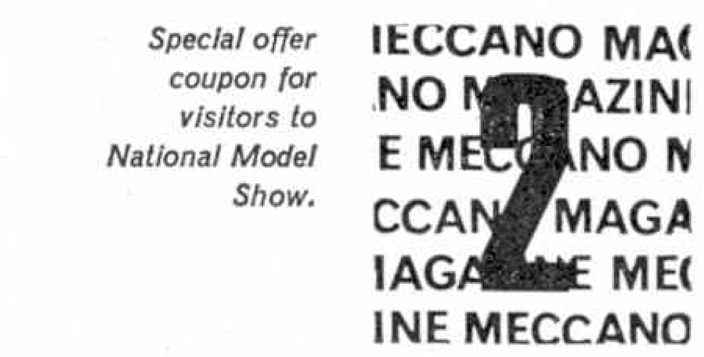
The first part this month, deals with basic needs—looks at some starter train sets—makes suggestions for wise buys. The next two parts tell you how best to increase the scope of the simple set by carefully selected additions to it. In short—GOOD PLANNING! A first class stage-by-stage development plan will enable you to get the very best from your equipment and the best value for your money—that's something we're all concerned about.

So be sure to place a regular order for Meccano Magazine because you'll need all three of these special railway features to keep that express on schedule!

The longer evenings mean more plastic kit building too. All types of kits—for railways, aircraft, boats, and cars. What's *your* special interest? Write and tell me about the kind of constructional article that you would like to see in Meccano Magazine: Kit reviews—modifying—painting—photographing, etc. Every month there'll be plastic kit features and I would like to be sure that there'll be something for everyone. Get out a postcard and book YOUR feature NOW!

The Editor

Special offer coupon for visitors to National Model Show.



Next month: Read about the thrilling Battle of the River Plate which ended with the scuttling of the crack German pocket battleship Admiral Graf Spee!

BIG RUSKIS!

Giant aeroplanes are not new to the U.S.S.R., the latest monsters seen at the Paris Air Show being merely the younger generation of an old family

BIGGEST surprise (literally!) at this year's Paris Air Show was the sudden arrival of the prototype Antonov An-22 transport over Le Bourget Airport. It is not the largest aeroplane ever built, as some newspapers claimed; in fact, even our own Bristol Brabazon of the early fifties had a wing span some 20 feet greater. What made the An-22 so exciting was that we were seeing for the first time the prototype of an entirely new kind of transport vehicle—the air-bus.

Inside the exhibition hall at the Show were models of 150/250-seat air-buses designed in France, and pictures of far bigger machines that U.S. companies hope to produce in the late sixties. Only Russia had the real thing there, for people to see and walk through.

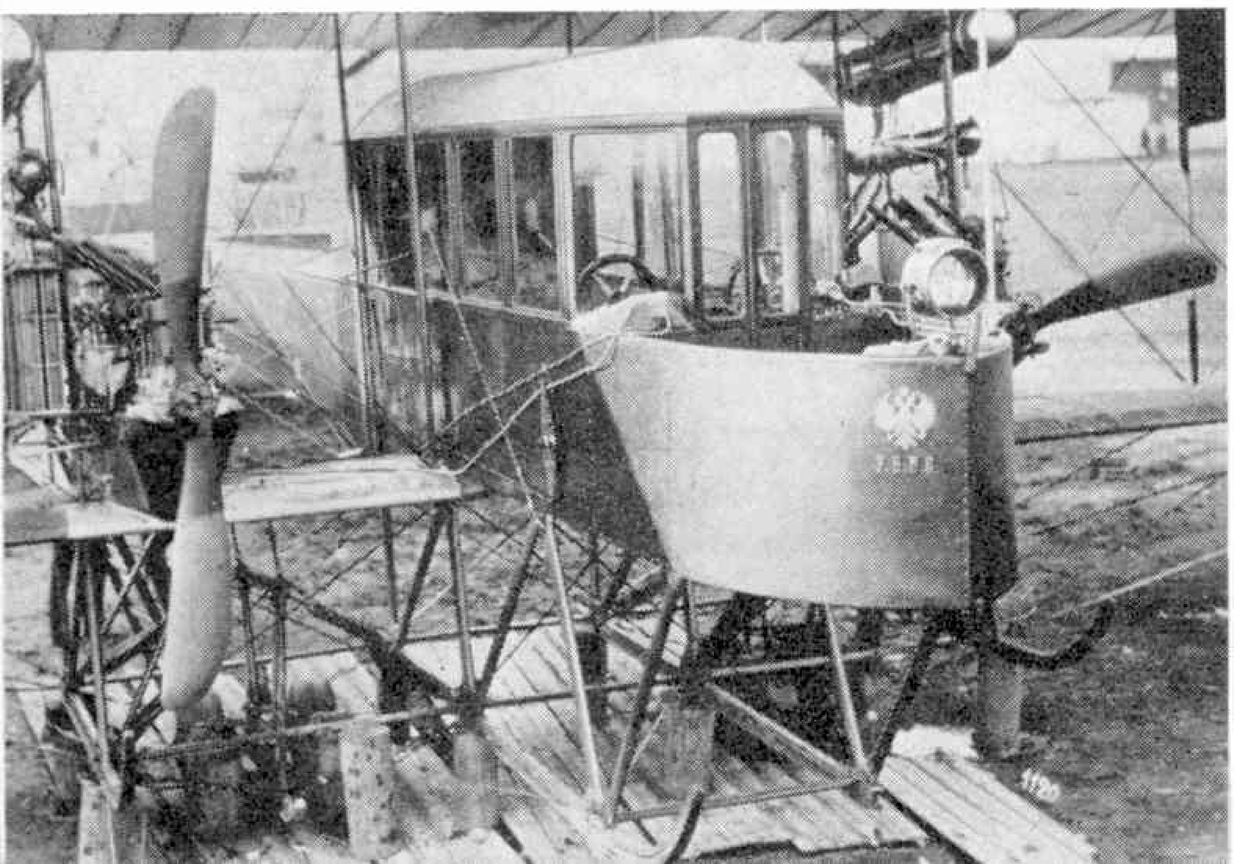
Photographs give little impression of the true size of the An-22. Some idea can be gained from the fact that when we went on board it we entered through a door that led into a tunnel through one of the fairings into which the main undercarriage retracts in flight. The aircraft's designer, Oleg Antonov, explained that when the 720-seat air-bus version of the An-22 appears in due course, it will be 50 feet longer than the prototype and will have different doors. There will be ten of them, leading into passenger cabins on two decks. The cabins will include a bar and a special room for mothers with small children; and there will be ten or twelve stewardesses to look after the passengers, who will be entertained with TV and films during non-stop flights of up to 6,800 miles.

This may sound like a Russian fairy story, but it shouldn't. The Russians have been building big aeroplanes longer than anyone else, *and* equipping them to standards far in advance of their day.

The first-ever four-engined aeroplane was built in Russia, by Igor Sikorsky, back in May, 1913. He called it *Le Grand*, the Big One, and it flew so well that he built the even larger *Ilia Mourometz* a few months later. This was an amazing aircraft for its time, with a heated cabin in which meals could be served, a toilet, and even a promenade deck above the rear fuselage on which intrepid passengers could, and did, go for a breath of fresh air in flight. Although its four 100-140 h.p. engines gave the *Ilia Mourometz* a cruising speed of only 62 m.p.h., this must have been quite a draughty experience.

When World War I started, Sikorsky

The first ever 4 engined aeroplane—the Sikorsky Le Grand of 1913. *The real grandfather of the latest giant was this Maxim Gorky. Photos via Air-Britain archives*



The gigantic AN-22 at Paris. It can lift 720 passengers

built more than 70 of these giant biplanes for the Tzar's "Squadron of Flying Ships". They made 400 bombing raids against the Germans, for the loss of only one of their number.

Of all the outsize aircraft produced in the Soviet Union in the twenties and thirties, none was more famous than the *Maxim Gorky*. Designed by Andrei Tupolev, it was the largest landplane in the world, powered by eight 750 h.p. engines and with a span of 206 ft., about the same as the AN-22 of today.

According to the 1934 edition of *Jane's All the World's Aircraft*, the *Maxim Gorky* could carry a crew of 23 and 40 passengers. Included among its equipment were a printing press and photographic laboratory for the preparation of newspapers and leaflets, radio transmitters and loudspeakers for broadcasting in flight, cinema projectors for showing propoganda films at airfields along its route, and electrical apparatus for displaying slogans in electric bulbs under its wings and fuselage. Each cabin was 6 ft. in height and contained four sleeping bunks; and there were also a passenger lounge and buffet, mess for the crew, wireless telephone exchange, editorial office and toilets.

Alas, the *Maxim Gorky* met a sad end. In May, 1935, it collided with a small single-engined aircraft which was performing aerobatics and it crashed, killing 49 passengers and crew.

The Risk

This kind of risk is the greatest argument against building modern air-buses. Last year, for example, a total of 583 people were killed in accidents on scheduled airline services throughout the world (except in Russia and China, for which no figures are available). One accident to an An-22 could therefore cause greater loss of life than a whole year of airline operations today.

Despite this, few experts doubt that airliners will get bigger, and Russia is certainly setting the pace. In addition to the full range of fixed-wing airliners brought to Le Bourget, the Mil Mi-6 helicopter was demonstrated for the first time in the west. Biggest helicopter in the world, it has a rotor diameter of 115 ft., is powered by two 5,500 h.p. shaft-turbines, and can carry 70-80 passengers in its standard form. A good idea of its performance is given by the fact that its officially-recognised records include a speed of 211 m.p.h. around a 62-mile course and a height record of 8,983 ft. carrying a 20-ton payload. It could, in fact, carry as cargo the biggest helicopter built anywhere in the world outside Russia, with the latter fully loaded.

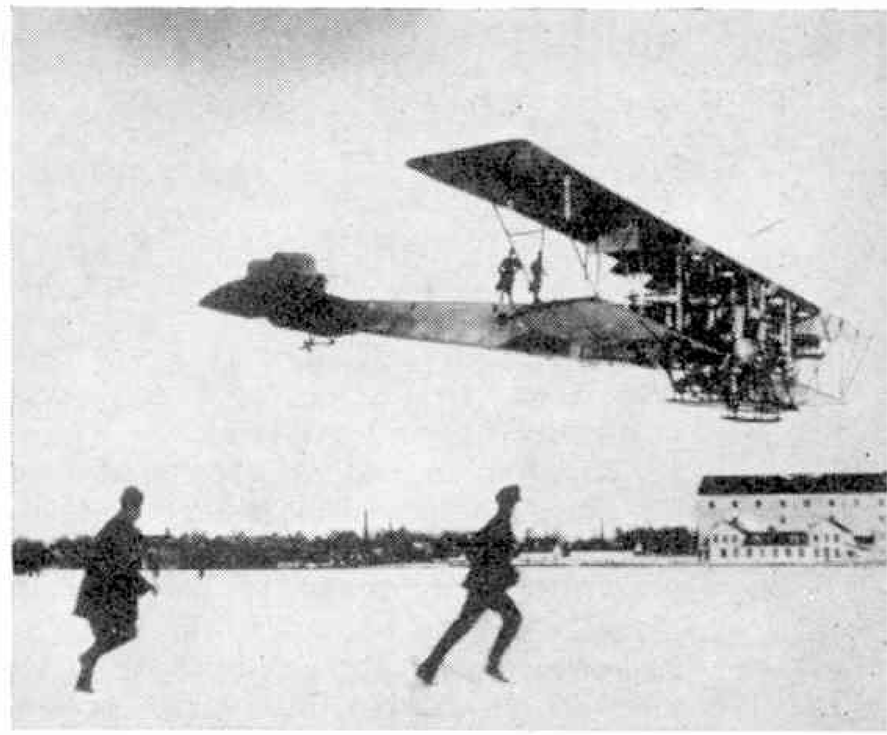
Flying Cinema

For straightforward flying-crane duties, Mikhail Mil has evolved from the Mi-6 the Mi-10, looking like some huge silver insect when it stands on its four stalky legs. At the Paris Air Show, the Mi-10 flew with a Moscow motor coach slung on a platform between its legs. Its load on the flight to Paris had been a complete mobile cinema in which visitors could sit and watch films of Soviet aviation achievements—a flashback to the *Maxim Gorky*.

How good are all these Russian aircraft? This is not an easy question to answer, because it depends on what we are looking for. In many respects, particularly in equipment like radio and radar, the Soviet machines are less advanced than their Western counterparts; but their performance is so good that they hold a high proportion of the world's aviation records. What is more, even the huge An-22 has six wheels, fitted with low-pressure tyres, on each of its main undercarriage units, enabling it to operate from places with no proper airport. The twin-turboprop, 50-passenger An-24 underlined this very desirable capability at Le Bourget by disdaining to use the runways and taking off from the grass instead.

At the moment, therefore, Soviet aircraft can best be described as practical rather than advanced technically; but Russian designers are learning fast. If any proof were needed, it was given in the shape of a model of the Tu-144, a Concorde-like machine that may well be the first supersonic airliner to fly anywhere in the world in 1967-68.

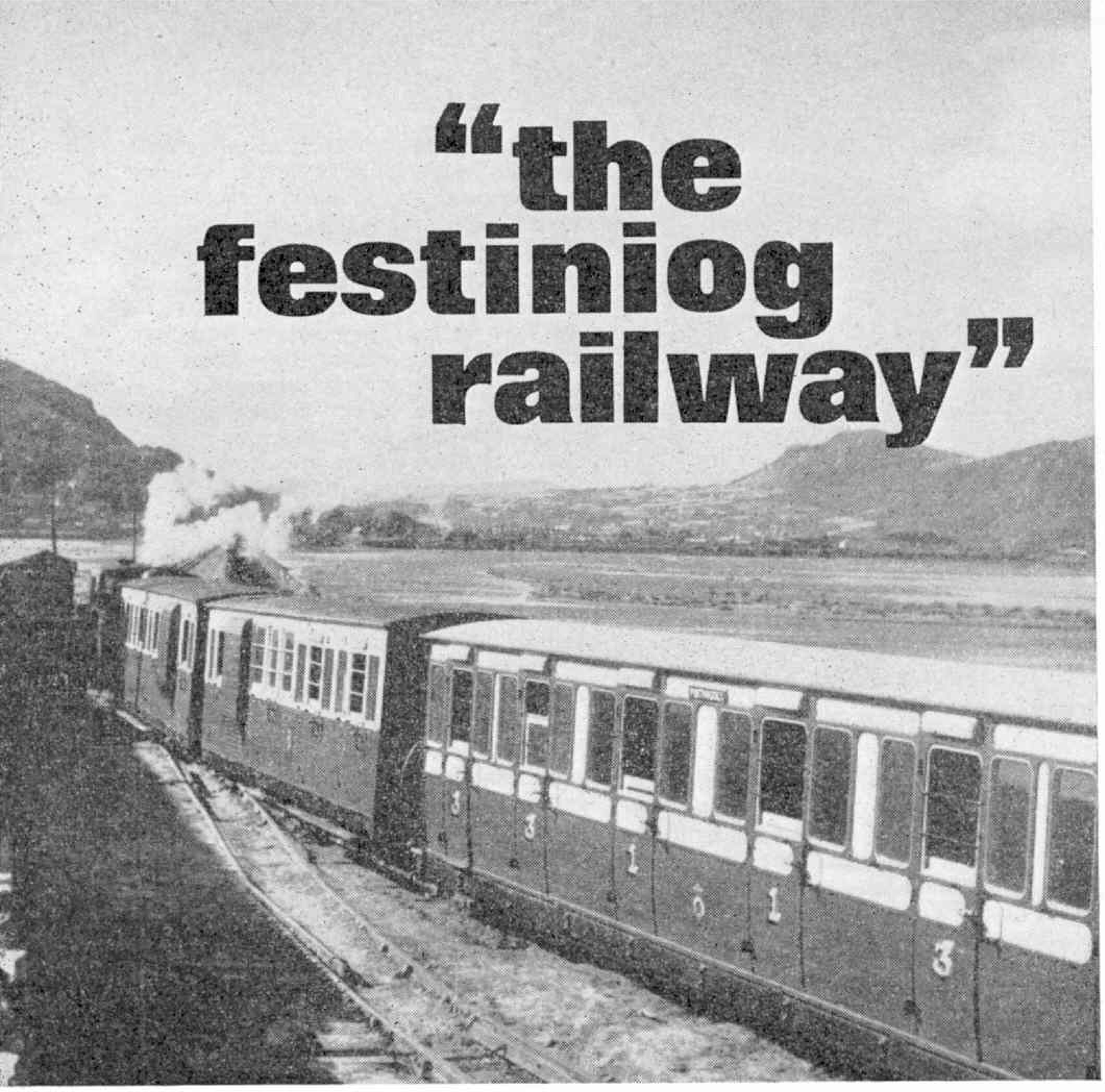
John W. R. Taylor



Passengers could take a windy walk ON the Ilia Mourometz in flight. Photo Via Air-Britain archives.

Below: the biggest helicopter in the world is this Mil Mi-6

"the festiniog railway"



A passenger train running onto the cob, to cross Traeth Mawr to Portmadoc, seen in the distance

IF you have ever visited the Snowdonia National Park in North Wales, the chances are that you will have seen or travelled on, the narrow gauge railway that runs from the town of Portmadoc, Caernarvonshire, to Tan-y-Bwlch, 6½ miles away in Merionethshire. This railway, once exclusively a slate carrying line, was thought to have passed into history by many people when it closed after the second world war, but its renovation and re-opening once thought an impossible task, accomplished by an enthusiastic band of volunteers, has earned the respect of many thousands of people of all nationalities. The original society, which has now grown considerably in strength, is still very active, and both it and the revitalised Company have made the Festiniog railway one of the most popular tourist attractions in the majestic Snowdonia National Park.

The Festiniog Railway was one of the many by-products of the Industrial Revolution since it was conceived at a time when the demand for raw materials—especially iron, steel, coal and slate—had begun to grow to feed the new industries in England. Slate was at that time chiefly obtainable from the extensive quarries in North and Central Wales, particularly Penrhyn and Blaenau Festiniog, where it was mined and then transported to the wharfs at Portmadoc harbour. As the demand for slate increased, the industry grew, and the need for an improved transport system was soon felt. With other successfully built railway systems to act as a spur and an example, the original promotors decided to build a narrow gauge railway from the quarries at Blaenau Festiniog to the harbour at Portmadoc.

A company was formed in May 1832 by an Act of Parliament, and construction began under the brilliant guidance of James Spooner, who built the line to a gauge of 1 ft. 11⅝ in. on a ruling

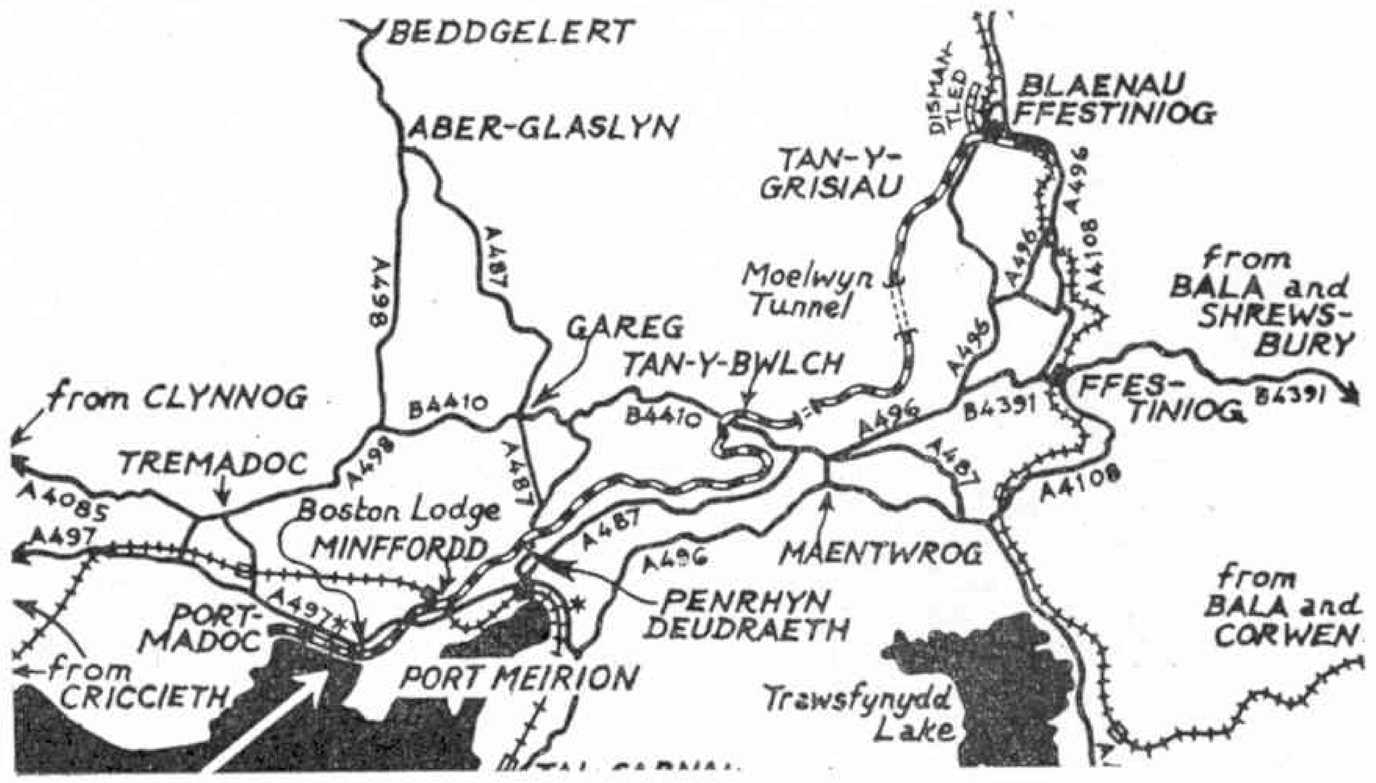
'Merddin Emrys' near Trwyn-y-Garnedd

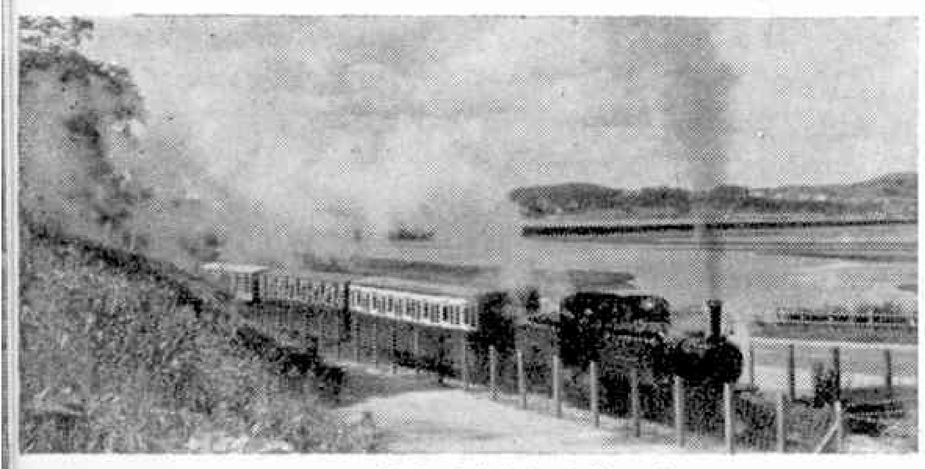
gradient of 1 in 80, to allow trains to be worked by the action of gravity down the line. On the opening of the railway on April 20th, 1836, trains were worked up the line by horses, a method of operation that continued until as recently as 1939.

So astronomical was the growth of the slate industry, that by 1860, the railway found itself quite unable to deal with the immense quantity of trade that it was now called upon to carry. The horse drawn trains at that time in use, were so obviously inadequate, that by 1863, in the teeth of opposition from many eminent railway and locomotive engineers, including I. K. Brunel, the decision was taken to adopt steam traction. George England & Co., of New Cross, London, produced the first four locomotives to be used on the line, and one of these, 'Prince', although rebuilt, is still running to this day.

The first passengers

Passengers were not carried on the railway until 1865 when permission had been granted by the Board of Trade—the first railway of less than 4 ft. 8½ in. to be so favoured. The centenary of this momentous event will be celebrated this year. Four wheel box-like coaches were provided for the first services, which proved an immediate success, and resulted in the construction of a further





'Merddin' in full cry!

two locomotives, 'Welsh Pony' and 'Little Giant', also built by George England and Co. This caused a further increase in traffic, which the railway once again found itself unable to deal with, and in 1869 powers were granted for the company to double its track, but the introduction of a more powerful locomotive type avoided this necessity. A number of the original four wheel coaches still survive, being used on trains until quite recently.

The new locomotive created something of a sensation in the railway world, primarily because of the use of the Fairlie double ended articulated arrangement. The first locomotive to be built was 'Little Wonder' which was so successful that three more were subsequently built, two of them in the company's own workshop at Boston Lodge.

With the arrival of the standard gauge railways to Blaenau Festiniog, the decline of sailing ships, and the increasingly universal use of tiles, the popularity of Portmadoc as a port began to decline, and by the end of the first world war the Festiniog Railway, whose fortunes had always been dependent on the slate quarries, was in a very poor condition.

The summer tourist traffic was built up considerably in the early 1930's, but unfortunately the effort was not maintained, and on the outbreak of war in 1939, passenger services finally ceased, together with the workmen's trains. Although a small number of freight trains were operated throughout the war, these too finally ceased in 1946.

Restoration

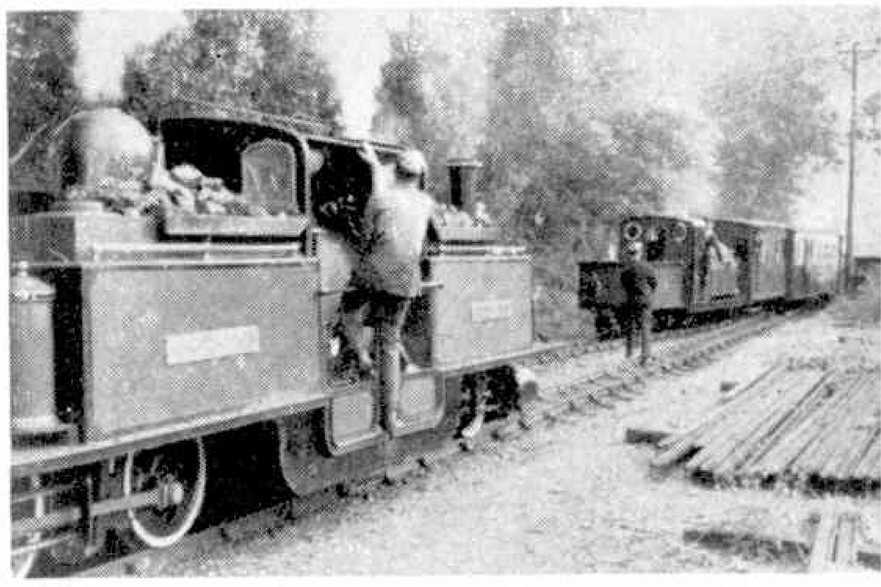
The Ministry of Transport refused to allow the railway a grant towards its rehabilitation after the war for the expected post-war tourist traffic, and yet the railway could not be sold for scrap without a further Act of Parliament, for which the company could not find the money. The route of the line therefore, remained as it was, as indeed did the rolling stock. Weeds, trees and other vegetation gradually covered the permanent way, and buildings slowly crumbled. An air of dereliction eventually pervaded the whole line and although several abortive schemes were put forward to re-open the railway, all were doomed to failure, until a group of enthusiasts met in 1951. This eventually resulted in Mr. Alan Pegler securing a controlling interest in the Railway Company in 1954. A supporting Society was also formed to assist the new administration and to help restore and operate the railway. The two organisations are now closely linked in a legal and practical manner in the day-to-day operation of the line.

Work was soon started in the restoration of the line section by section, and in 1955 trains ran across the embankment only. 1956, however, saw the opening of the section to Minffordd, followed a year later by Penrhyn. Coaches were also restored, and the double Fairlie locomotive 'Taliesin', now 'Earl of Merioneth', was also rebuilt. A further four mile extension to Tan-y-Bwlch was completed in 1958, and this is still the temporary upper terminus of the line.

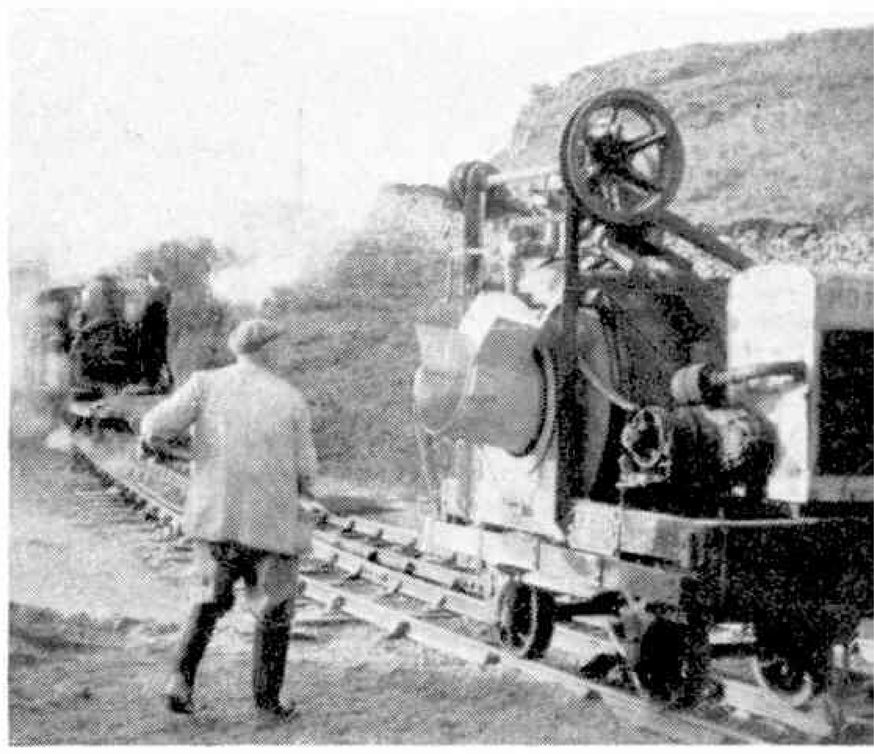
A setback to the planned restoration of the remainder of the line to Blaenau Festiniog was the decision by the Central Electricity Board to create the Llyn Stwlan dam and the Llyn Ysytradau lake. This scheme involved the flooding of the railway's permanent way along the valley from the Meolwyn Tunnel to the village of Tan-y-Grisiau. Construction of an ambitious diversion has now commenced to carry the railway to the village of Tan-y-Grisiau. The new route will begin at Ddaullt where the line will make a spiral to gain height, after which it will run up above the entrance to the old tunnel and round to its right, to an eventual summit of 655 ft. after a short tunnel. This will take it along the right hand side of the lake past Brooks Quarry, to join onto the original railway route at Tan-y-Grisiau. An interesting feature of the diversion is that the existing ruling gradient of 1 in 80 is maintained.

Coaches and further locomotives are still needed for existing services and many more items of rolling stock will be needed for a passenger service to Blaenau Festiniog. The company is, however, determined to reach its goal, and work is already proceeding on the section of permanent way above Tan-y-Grisiau. In an age when so many picturesque railways are falling victim to economic pressure, it is refreshing to find one that is not only holding its own, but building an extension to find new sources of revenue.

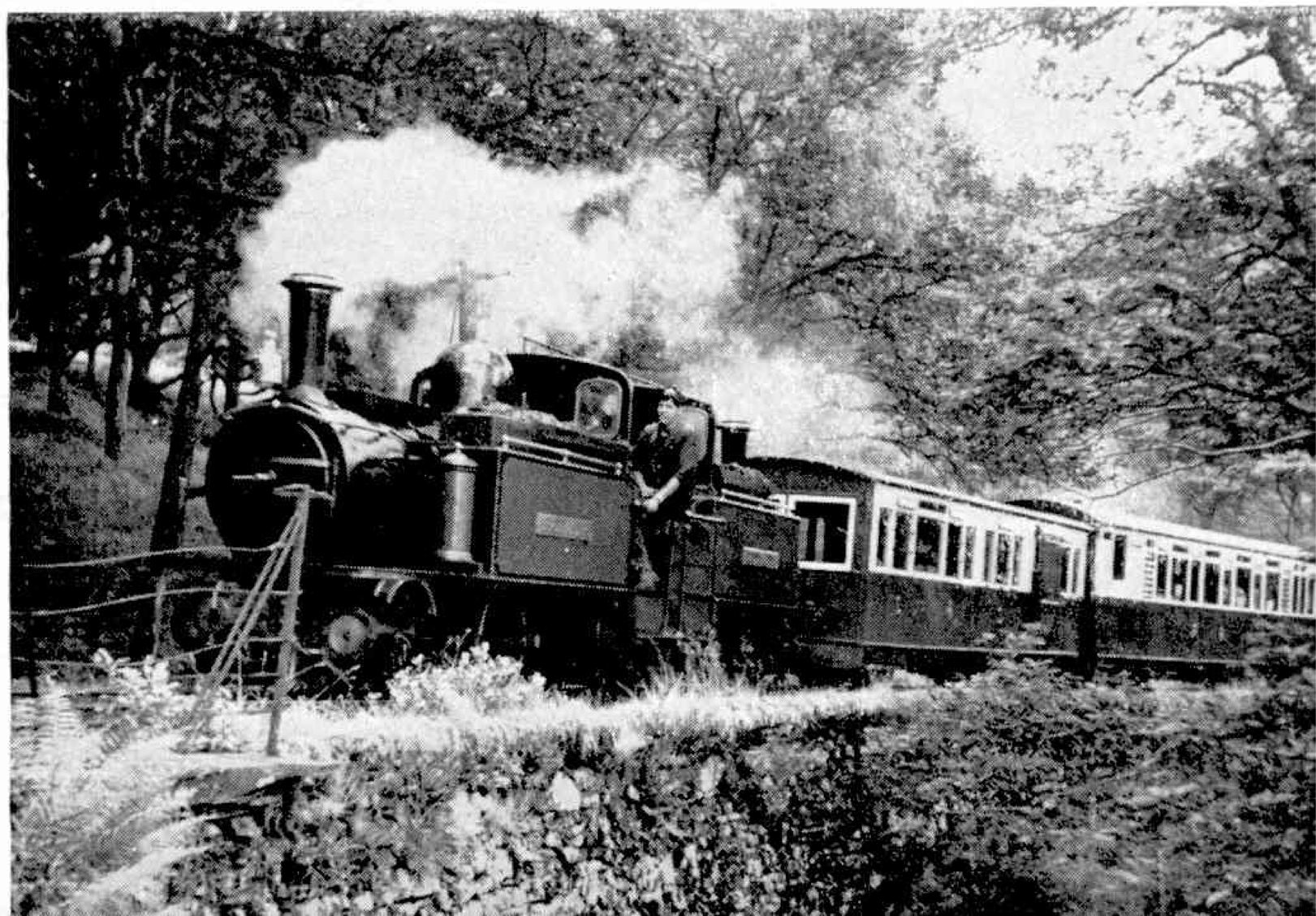
Mike Rickett

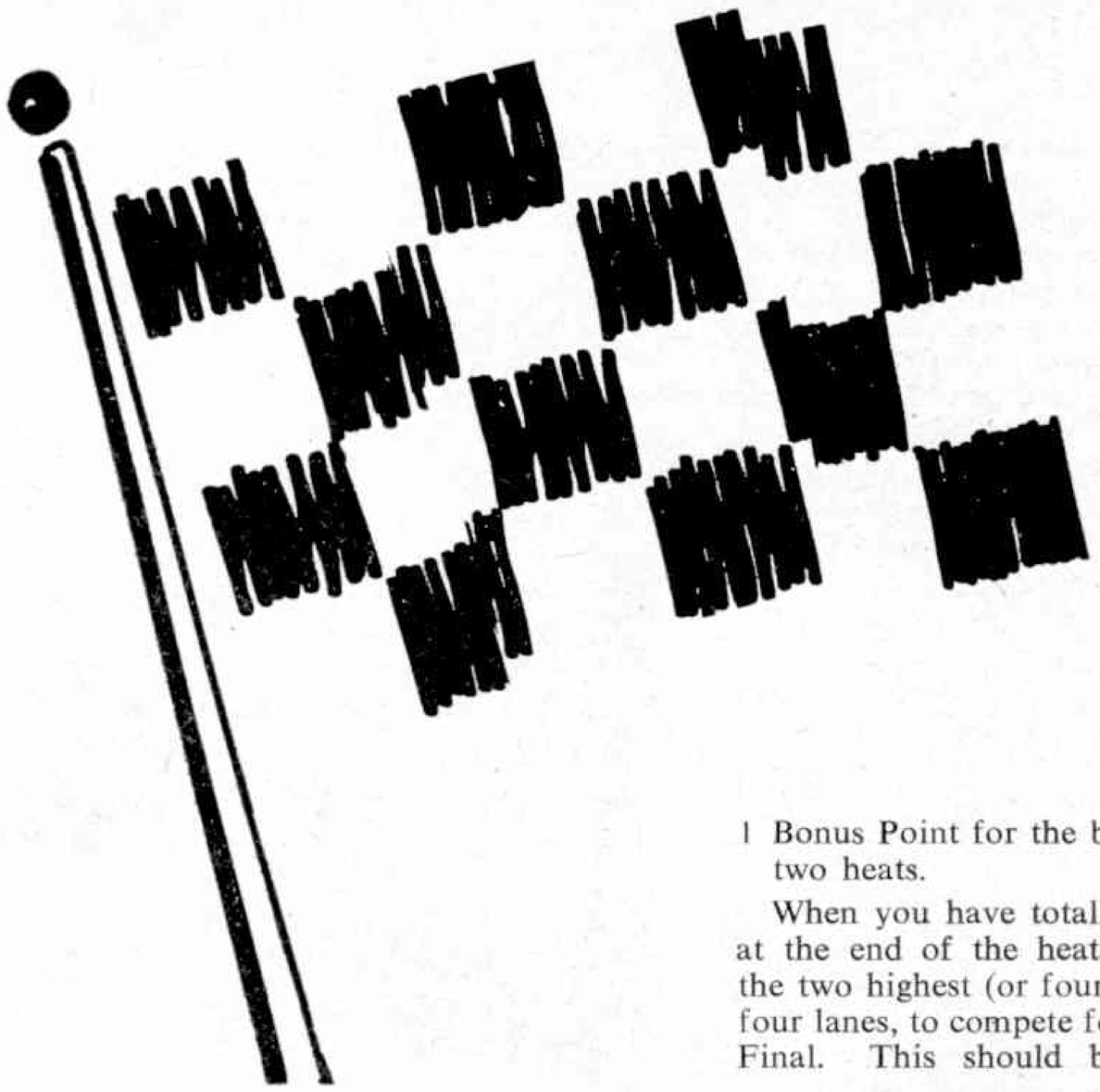


Two trains crossing at Minffordd, one of the intermediate stations



Above: volunteers working on one of the upper sections of the line at Tan-y-Bwlch. Below: a train with one of the double Fairlie locomotives crossing the embankment over the Traeth Mawr towards Portmadoc





by Pit-Man

ALL SET FOR THE GRAND PRIX

WHEN arranging a Grand Prix event amongst your friends or club members, remember that in any kind of competitive sport, rigid rules must be laid down to cater for any situation, in order that there is no argument or hold-up in the event. Similarly, in a Scalextric Grand Prix you must nominate your officials and lay down hard and fast rules for them and the competitors.

Assuming that you have a large number of possible entrants, you must whittle this down to a manageable figure and the easiest way to eliminate them is a straight forward knock-out competition on a simple 2-lane circuit. This is done by pairing the contestants together and racing them against each other, the winner of each pair racing against the winner of the next, and so on, until you have the number of heat winners you require. We shall assume that you are left with eight contestants.

You will realise by now that there are cars or lanes which favour the driver concerned and in order to give all drivers the same fair chances, you must race them against each other twice. You should now prepare a board or large sheet of paper on which to display each competitor's points and the results of each heat, and to help you I have prepared an illustration.

I have called the drivers A to H and you will see that they will all compete against each other twice—when A meets E, they race a given number of laps, then change over cars and lanes and race again. Each event is timed and points awarded as follows:

2 Points for a win
1 Point for the runner-up who completes the course
1 Bonus Point for the best time over the two heats.

When you have totalled up the points at the end of the heats, you can select the two highest (or four, if you are using four lanes, to compete for the Grand Prix Final. This should be raced over a greater number of laps and each lap timed so that you can make an award for the fastest lap, if you like. Now that we have planned the event, we organise the officials and lay down the rules.

Officials

You may find that you can split the job between two people or get an official to do more than one job, but basically you will require the following:

Track Marshal
Judge
Timekeeper and Starter
Track Stewards
Lap counters

The Track Marshal sees that all competitors are assembled together on the grid and also looks after the scoreboard.

The Judge controls the whole of the operation and decides each winner, which he announces. Any disputes are referred to him and his decision is final. This is a good job for Dad, in fact he and his friends may not only help as officials, but by donating prizes!

The Timekeeper, armed with a stop watch, ensures that the competitors get away to a fair start and finally hands in the times to the Judge.

The Track Stewards are appointed by the Track Marshal to various tricky points in the circuit and their job is to replace cars if they come off the track.

The Lap Counters—one to each car—call out the number of laps completed as each car passes the start line.

Rules

1. Only works cars will be used—that is to say, standard Scalextric models.
2. Competitors will not handle their own cars after the start, all cars will be replaced on the track by the Stewards.
3. In the event of a collision, the offending car (in the opinion of the Steward) will be replaced last.

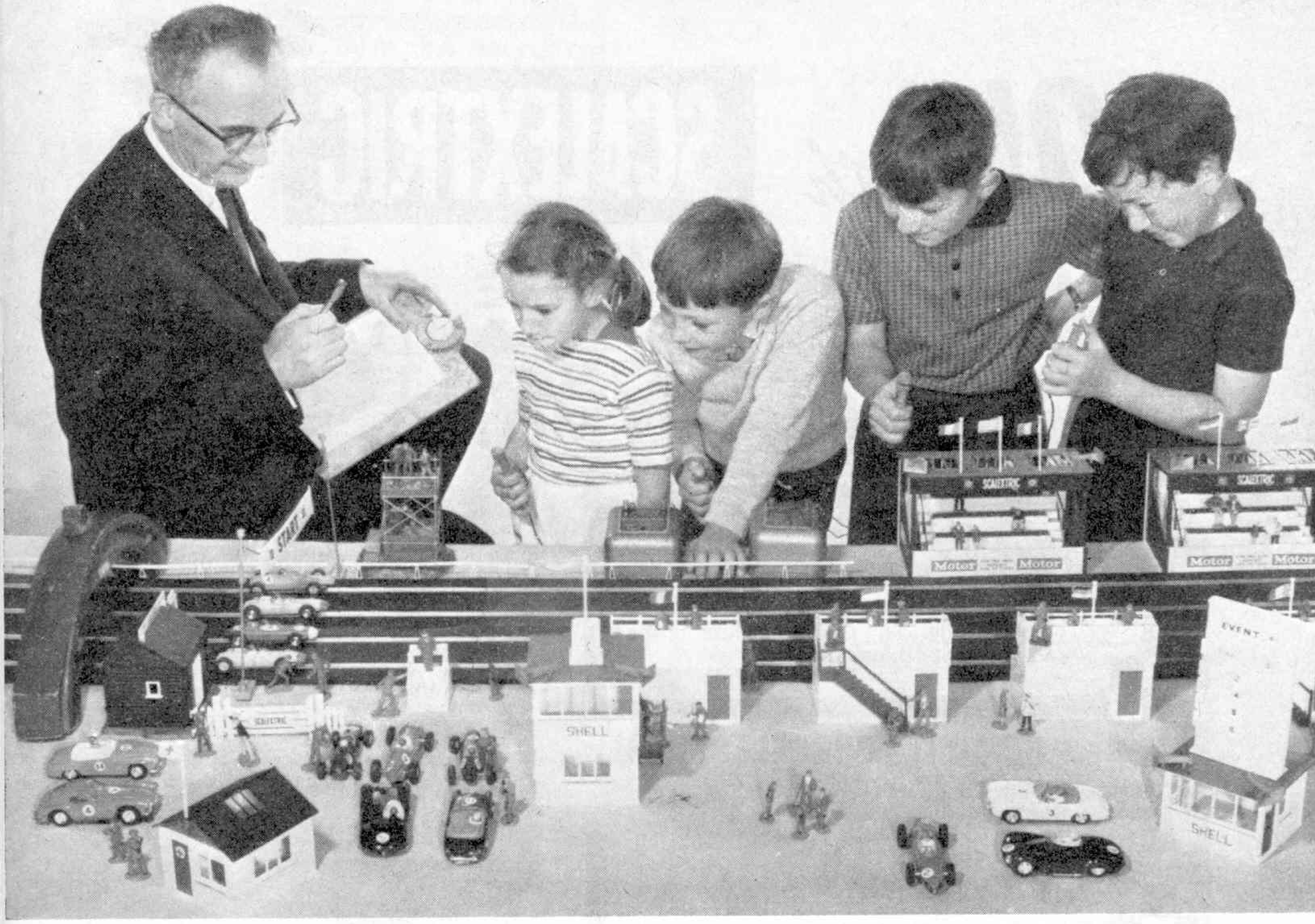
Other rules can be added to suit local conditions. This is the easiest and most fair way to run a Grand Prix. I have organised many in this way, including last year's Scalextric European Grand Prix in London. You may find it necessary to make minor alterations, but this will provide a basis for you to work on. By the way, if all your friends are using their own cars, they will obviously carry on using them when they change lanes during the heats.

It's the driver who counts

The top man in motor racing today, 1963 World Champion, winner of the Indianapolis 500 in 1965 and with 6 Grand Prix wins to put the World Championship once again in his pocket—Jim Clark, of course, and he enjoys Scalextric Model Motor Racing. Last year he spent many hours with us at the finals of the Scalextric European Grand Prix and afterwards said, "I enjoyed every minute of it," and this from the maestro himself is praise indeed. People enjoy Scalextric for its excitement and realism and you must have these two ingredients to get the best from model motor racing.

We have talked about the track, the cars and the general arrangement of the circuit and all these things must be just so, in order to get the best from your equipment. It is no use having an attractive and realistic layout if your cars are faulty; on the other hand, the best cars in the world are useless on a bad track. However, assuming that everything is in order, then it's the driver who counts. A few weeks ago at the Dutch Grand Prix, Jim Clark was driving his team's No. 2 car. He started in third place but within

This new Scalextric accessory (described on the facing page) now adds exciting sound effects to your race track



a few laps he was in his favourite position, leading the field and he steadily increased his lead to the finish.

Perfect your driving and your cars—practising, testing and practising again Concentrate on one car at a time, race it and time it, test it for speed, continuity, stability and road holding. Check the tyres and guide pin, does it falter at any point in the circuit. Not until you are satisfied that it is running at peak performance, do you leave it to start over again with the next car.

Circuit noises create the atmosphere

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SCALEXTRIC TRACK CHART

	A			B			C			D			E			F			G			H			
	HEAT 1	HEAT 2	BONUS	HEAT 1	HEAT 2	BONUS	HEAT 1	HEAT 2	BONUS	HEAT 1	HEAT 2	BONUS	HEAT 1	HEAT 2	BONUS	HEAT 1	HEAT 2	BONUS	HEAT 1	HEAT 2	BONUS	HEAT 1	HEAT 2	BONUS	TOTAL
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Here's how to prepare a racing track chart
Its use is described in the accompanying article

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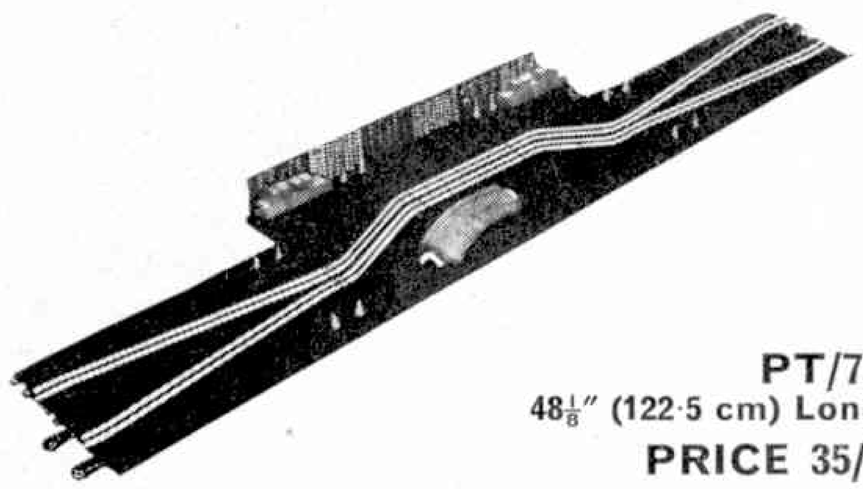

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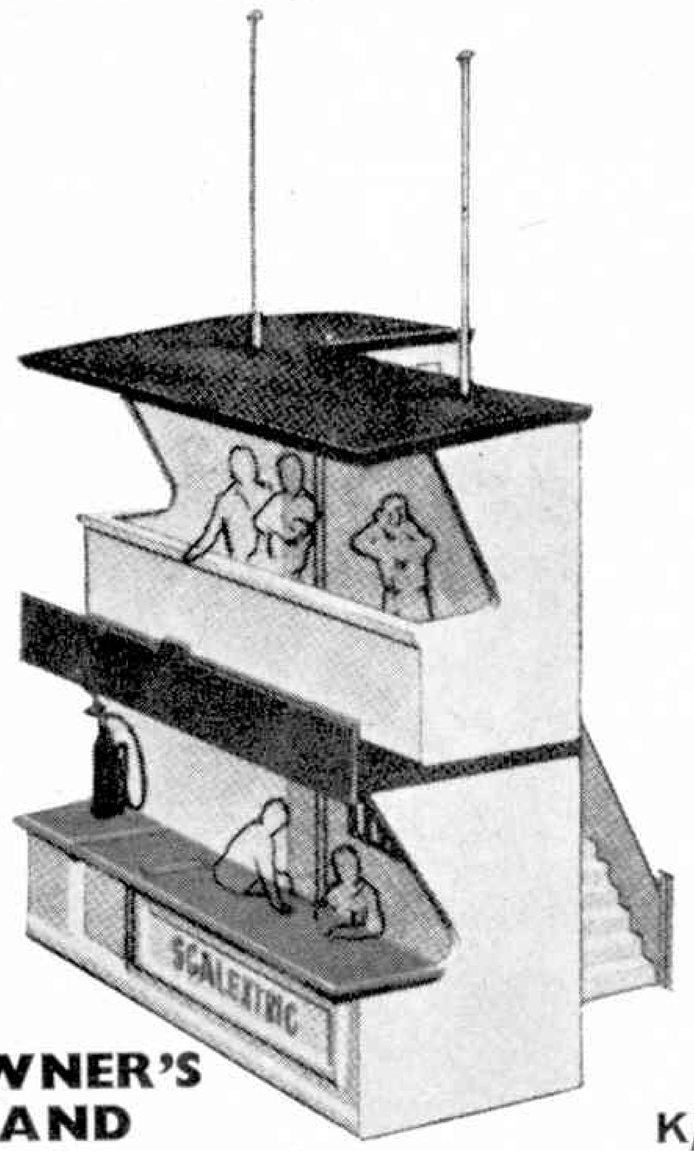

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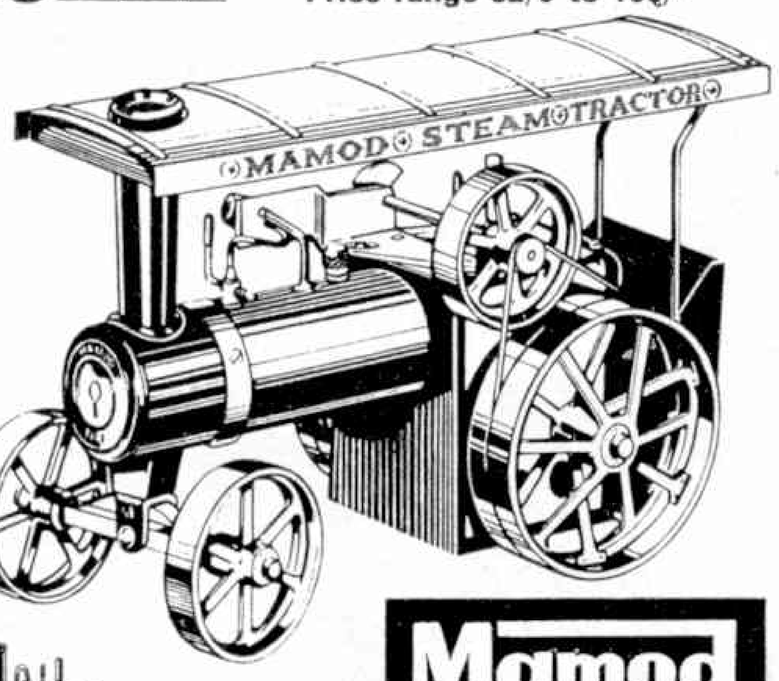

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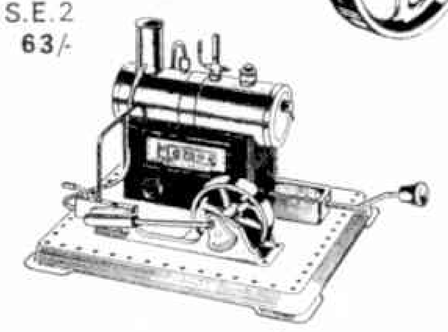

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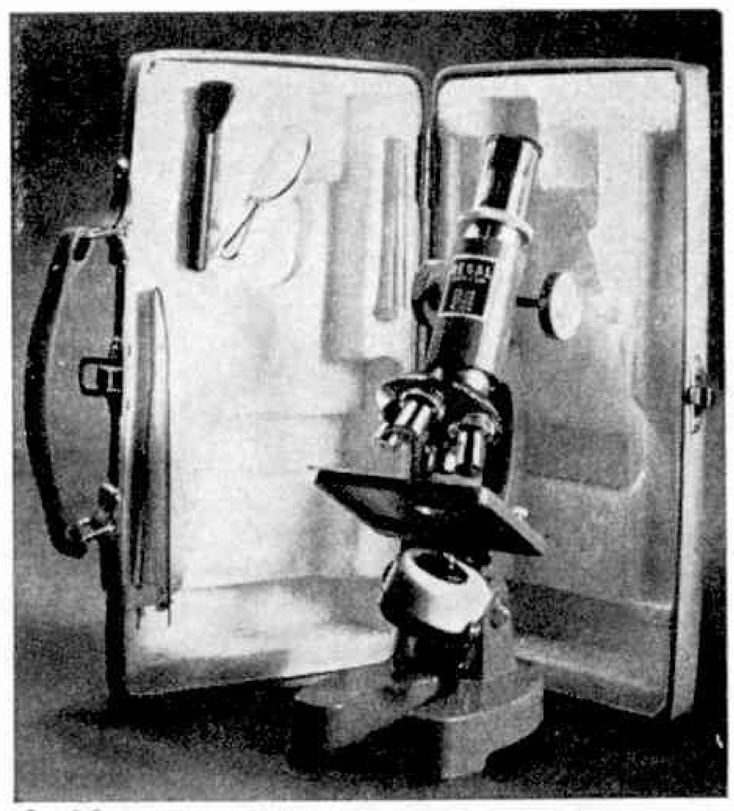

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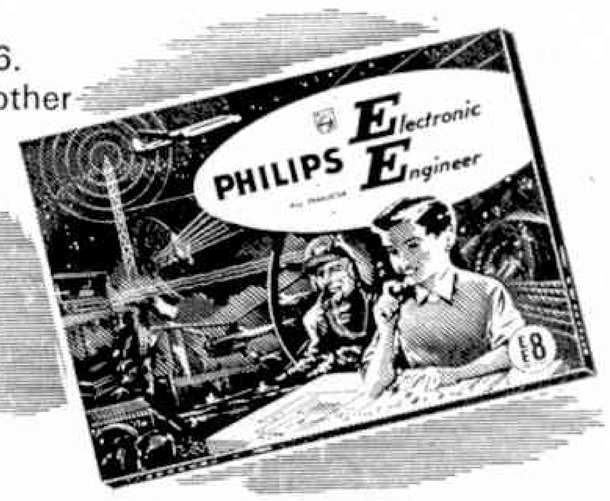

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(EK48)

The Flame in

'PORT engine's on fire!' Digger Ames' curt remark made the three other members of the crew of the troop-carrier whip round in their seats to look across the broad expanse of wing of the new 300-seat Argosy aircraft.

Ames was quite correct, of course. Hungry tongues of bluish-white flames were whipping back along the length of the double-banked 36-cylinder radial engine mounted far out along the wing. They were being fanned to blast-furnace strength by the blast of air from the immense De Havilland contra-rotating propeller that absorbed the 3,000-odd horse-power of the engine and, in the few seconds that followed Ames' announcement, the flames had increased.

'Extinguisher. Flight, quick', snapped Martin Tracey and the words had hardly left his lips before the Flight Engineer had stabbed down on the red button at his side. Foam hissed out all over the engine and the flames subsided into great clouds of steam and smoke that gradually lessened. While this was going on, Digger Ames was already sending out a general Mayday distress call and, in response to a quick nod from Martin Tracey, had requested immediate landing facilities at London Airport.

The Gamble

The response was virtually immediate. London Control Tower cut in with the welcome news that a runway had been cleared for the aircraft, all other aeroplanes had been ordered to keep well away from the area and, naturally, all emergency services had been laid on. The Argosy was on London Airport's radar and the controller was all set to talk the giant aircraft down.

Fire in the air is one of the emergencies the airman fears most. In spite of all the precautions taken, it can still strike at any time for no apparent reason and its results are completely unpredictable. It might be—as in this case—that the built-in extinguishers would kill the fire in a few seconds and the aircraft could land safely. At the other end of the scale, the fire could get out of control resulting in a shattering explosion and a huge flame in the sky that would make headlines in all the world's newspapers.

It was a special hazard as far as the Argosy was concerned for, in addition to the normal crew, the aircraft was also carrying two hundred fully armed soldiers on a demonstration flight for the War Office. A private enterprise job, the Argosy had been built to fulfil a long-felt want in modern warfare—an aircraft that could carry large numbers of troops quickly, cheaply and safely over relatively short distances.

The existing monstrous jet and turbo-prop troop-carriers were excellent machines in many ways but they were hideously expensive to build and maintain while special landing strips had to be built for them because of their fairly high landing and take-off speeds. Helicopters—useful enough for carrying a small number of soldiers were not good enough to move an Army Corps—and the Argosy had been built as the answer to the shortcomings of all these machines.

Martin Tracey was almost sick with rage. Although the brass at the War Office would realise that a fire was an inexplicable one-in-a-million chance, there would be a tedious Court of Inquiry and even though the Court would inevitably clear the design and construction of the Argosy, the delay caused and the slight doubts raised in some corners of Whitehall, coupled with the cuts in defence expenditure, could well mean the aircraft would be pigeon-holed and forgotten.

Even as these thoughts were racing through Martin Tracey's brain, Digger Ames spoke up again. 'Fire's restarted, skipper.' Tracey could hardly believe his ears or his eyes but, sure enough, there it was. Flames again licking back from the cowling just as if they had never been extinguished. The Flight Engineer stabbed the button and, again, foam spurted over the engine. Once more steam and smoke arose but this time the flames still played under the foam.

'Skipper,' said the engineer, 'the flames are crowding the foam and the extinguisher's almost finished. Can I cut the fuel to the engine?' Tracey

nodded. It was a big decision because the Argosy would now only be flying on one engine and while the power from the unit was more than enough to hold the aircraft on its course, loss of one engine would make landing more hazardous and with 200 troops in the aircraft, there was no room for errors . . .

The engine stopped and Tracey feathered the propeller so that it remained stationary. 'Fuel off and engine stopped, sir' reported the Flight Engineer formally and the four men in the flight deck looked anxiously at the silent engine. Once the petrol supply had been cut off, the fire should die out.

For ten long seconds, the fire continued and it fell to Tracey to make the statement. 'Looks as though the feed pipe from the wing-tanks has burned through and fuel is spilling out inside the wing', he said calmly. 'So far it is pouring out through the engine nacelle and we cannot stop it. But if it oozes further down the wing, it could spread the fire to the whole aircraft—and then we *are* in trouble. Digger. Get the soldiers' C.O. in here and we'll put him in the picture.'

Ames vanished for a few seconds and returned with a worried-looking Major. Most of his men had seen the fire start

the Sky

again in the engine and all the soldiers were justifiably apprehensive. The Major listened quietly while Martin Tracey explained the situation and then asked him for ideas to keep his troops happy.

In spite of the frightening situation, Martin Tracey found it hard not to smile. Happy, indeed!

'Heres the routine, Major,' he said. 'If we fly any faster, the wind will fan those flames until it is possible for the wing to be burned right off. If, on the other hand we lose too much speed, the loss of the wind will allow the flames to billow up to a certain extent and this will spread the fire. What I am going to try is to fly the aircraft with the port wing dipped as far as possible so that the flames will be blown away from it. We will try to reach London Airport as soon as we can and land.

'Assuming we get that far, two major snags crop up. One is that the undercarriage may have been affected by the fire; perhaps the tyres of the multi-wheel landing gear have been burned through; perhaps the oil in the shock-absorbers has been boiled away by the heat; perhaps some joints have been welded up solid by the flames—there are a dozen faults possible.

'But if we are lucky enough to get down in one piece, we shall be moving relatively slowly and we will soon come to a complete halt. When this happens, the petrol tank will almost certainly blow up unless the fire tenders can get alongside fast enough to pump hundreds of gallons of foam all over the wing.

'What I suggest is that, when we are down to about 30 m.p.h. on the deck, I jettison all the doors on the fuselage and your men jump out. They will collect some nasty bruises and probably some will break a leg or an arm—but that's better than being fried or blown to bits. O.K.?'

Diversion!

The major smiled bleakly at the frightening run-down of their chances of survival and went back to tell his troops what was going on. There was one final snag that Tracey had not bothered to tell him and that was one that could mean all the difference between life and death for every man on the 'plane.

Because of the fire and the distinct possibility of the aircraft getting out of control, Tracey dared not fly across London. Instead, he would have to sweep right round over Watford and come in from the deserted side. This would take another ten minutes over the direct route—ten minutes that could be ill-afforded.

'Right-o chaps,' he announced. 'We are now going to fly port wing low. Flight, keep an eye on the fire and let me know how the flames are behaving. Digger, keep your eyes peeled for Watford Junction sidings and sparks, contact London and tell them the form. I do not think their talk-down is going to help much. We are going to play this very much by ear.'

He eased the huge aircraft over and, as the flames licked away from the wing, the damage already done could be clearly seen. A great hole had been burned through the aluminium cowling of the engine and a considerable amount of damage had spread to the wing itself, Some loss of lift was inevitable already and if the flames were allowed to have their own way much longer, more and more of the wing would become affected. It was even possible for a main spar to become burnt right through which would mean part of the wing collapsing, making a crash certain.

The strain of holding the aircraft at an acute angle with only one engine working was considerable and Tracey was soon bathed in sweat. His arms felt as though they were being pulled from their sockets and he nodded to the co-pilot to take some of the effort.

'Flames seem to be creeping back towards the fuselage, skipper' reported the Flight Engineer. Tracey nodded grimly—he had half expected this. Petrol was creeping back inside the wing and was starting to burn. He tipped the aircraft over even more to try to keep the fuel at the wing-tip and, after a couple of minutes that seemed like hours, the Flight Engineer reported the fire had stopped its deadly march.

Tipped over at a crazy angle, Tracey could see the broad green slash of Epping Forest far below him and, beyond that, the glinting greenhouses of Hertfordshire. There was the white ribbon of the M.1 with hundreds of little black ants scooting along it and . . .

'Watford Junction just below us, skipper,' yelled Digger Ames, perched uncomfortably on the high side of the flight-deck. Tracey grunted. The fun was about to start.

In the normal course of events, he would have banked with the port wing high to get into the London Airport traffic lane but, in these circumstances, that was impossible. He would have to make the turn in a wide skidding movement that would impose strains on the aircraft no designer had ever dreamed of—and those strains would be on an aircraft with only one engine and a wing that had been damaged.

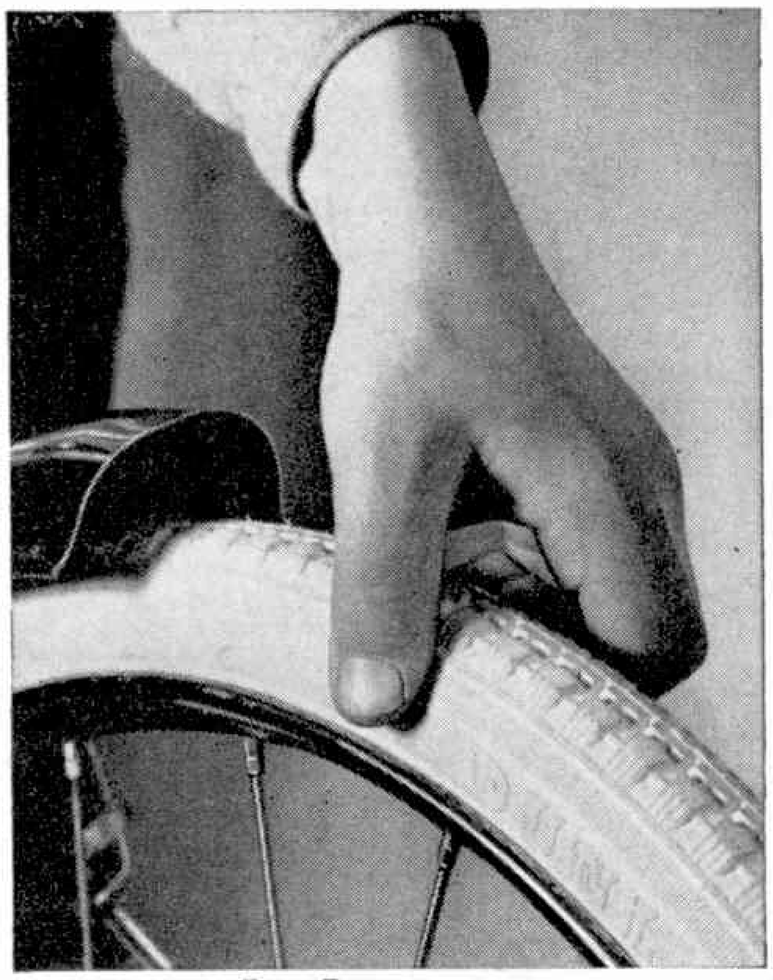
He throttled back on the starboard engine and, keeping the stick hard over, eased the rudder-bar round. The Argosy responded resentfully to the contradictory control movements and came round sluggishly, weaving and rolling like a wounded porpoise. Tracey had time to think sympathetically of the anguish of the unhappy soldiers in the main section of the 'plane who must now be suffering the agonies of the damned with air-sickness on top of all their other troubles. Then his sympathies vanished in a flash as the Argosy wallowed and dropped in one of the freak air-currents that escape from the Dunstable Downs.

The Flames Spread

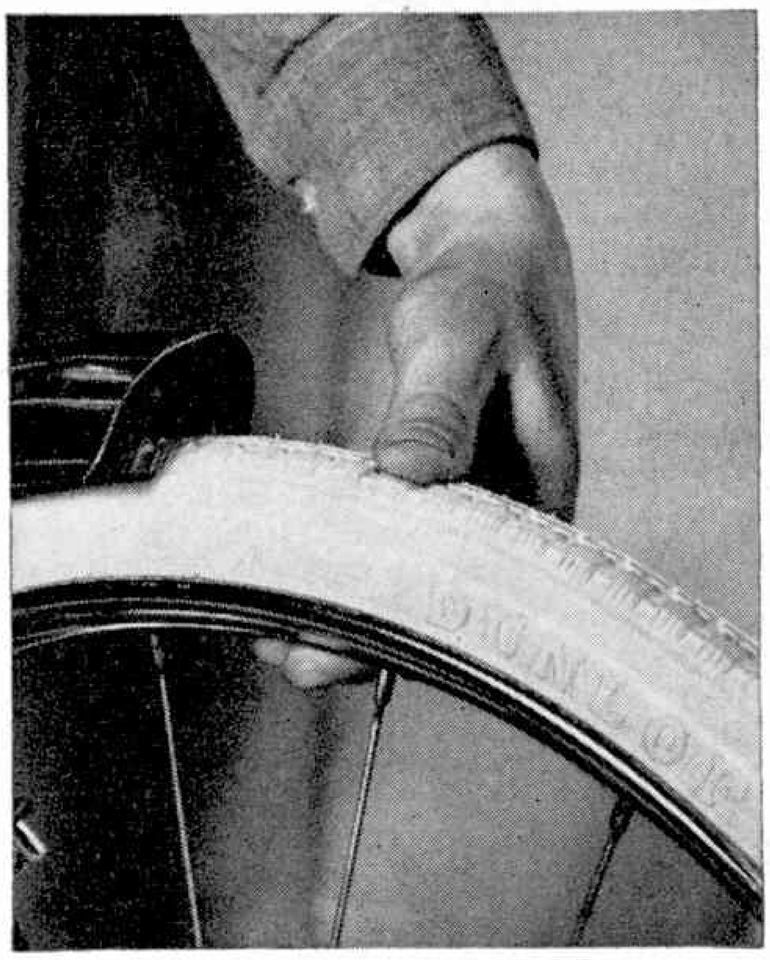
Much sought after by glider pilots, the weird thermals and cross-currents of air that arise from the bump in the middle of the otherwise flat Hertfordshire countryside are heartily cursed by pilots of powered machines who sometimes hit them with all the force of a car striking a kerb. And in the middle of a complicated manoeuvre like this, too.

Tracey bit back the oath he had ready—it was quite inadequate for such an occasion—and he contented himself with banging the throttle wide open and bringing the aircraft on a level keel for the three seconds necessary to bring it

Continued on page 37



right . . .



or wrong?

Which way do you test your tyre pressures? The correct way is to pinch the sides of the tyre between your forefinger, braced by the other fingers, and your thumb. It is incorrect to press your thumb down on top of the tread, as this will give you a false idea of the air pressure inside. If your tyre appears to be losing air too quickly, check that the valve is still intact, and turn the wheel round slowly to see there are no cuts or tacks etc., embedded in the tyre.

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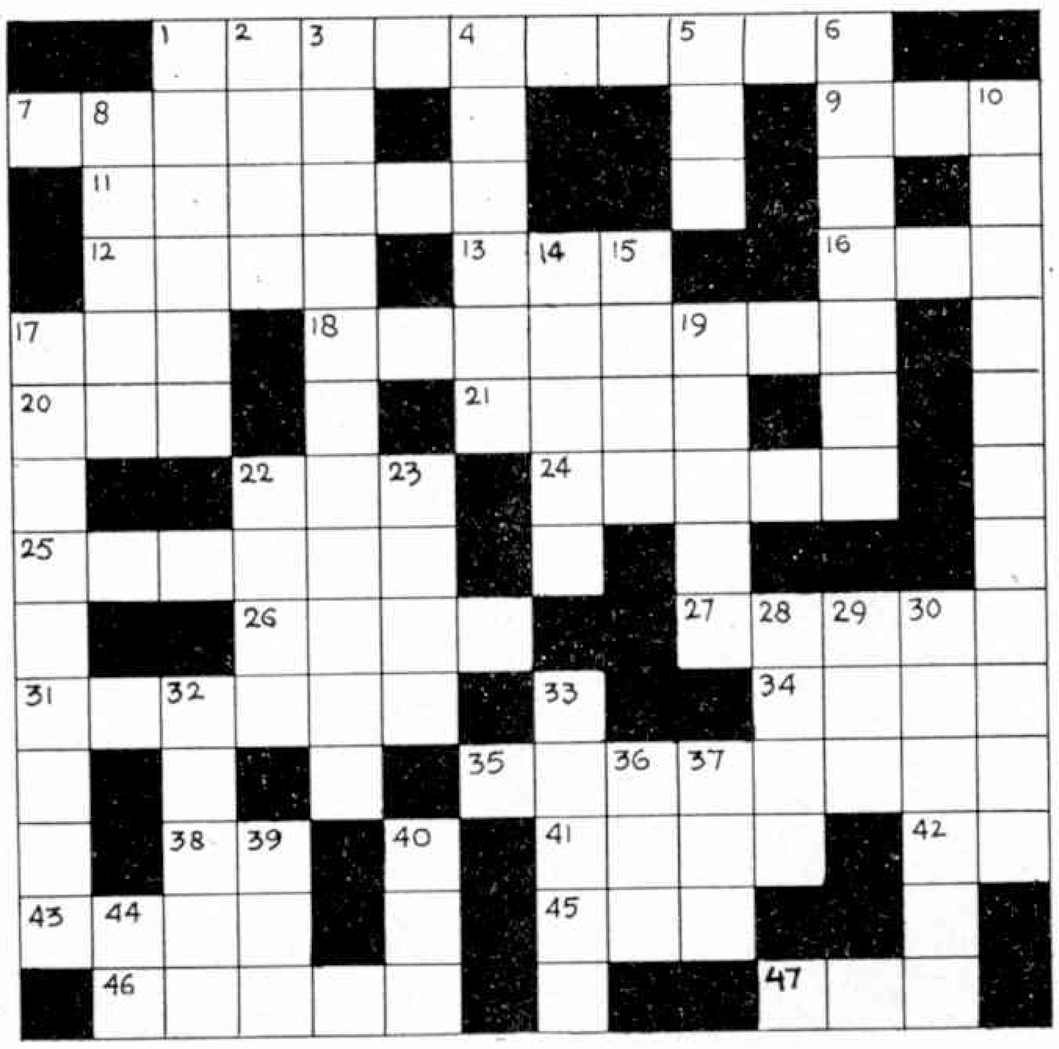
Crossword Puzzle No. 10



ACROSS

1 Initiative
7 Helps you up
9 Nothing
11 Rise
12 Pace
13 Finish
16 To hurry
17 Consumed
18 Indirect remark
20 By
21 Found in a wood
22 Rodent
24 Traitors
25 Decorative
26 Commits offence
27 An animal
31 Hold a beverage
34 Jetty
35 Ribbon that floats
38 Depart
41 To turn like a wheel
42 Belonging to
43 A river
45 To direct at
46 Sinew
47 A colour

DOWN

1 A festival (religious)
2 Pleasant
3 Fear
4 As 22 across
5 Coloured liquid
6 To absorb wholly
8 A sample lick!
10 Town in Ireland
14 Cares for the sick
15 Far down
17 To give a share
19 Horse talk
22 Coarse file
23 Portable home
28 Precious stone
29 Edge
30 Appeared to be
32 A corner
33 A binder
36 French for king
37 A tree
39 Over (poetical)
40 Observe
44 Not out

Puzzle Page

Turn to page 37 for answers to the puzzles on this page

Tricky Teasers

In this sentence, six numbers are hidden. Can you say what they are? To give you a clue, we've printed the first one in heavy type.

"We of**ten** go on each day, and look for a plot worth buying; but many times evening comes without any luck—and if our luck doesn't change we must drop the project, even if I've lost money."

* * *

A man was looking at a portait of someone and he said to himself:

"Sisters and brothers have I none—but this man's father is my father's son."

Who was he looking at?

* * *

ALPHABETICALLY speaking, here's a quickness test! See how long it takes you to say what relation it is that one group of letters has to the other group in each of the following lines:

1. BACACBAC .. .. AAABBCCC
2. WVUTSR .. .. MLKJIH
3. SNEAK .. .. .. SKANE
4. PRTVXZ .. .. GIKMOQ
5. OEIUA .. .. .. OIEAU

Give This Your All

HOW quickly can you complete the following terms by filling in the name of some part of the human body? Answer No. 1, for instance, is "brainstorm."

1. ..... storm Sudden idea
2. ..... cuff Manacle
3. ..... ground Experience
4. ..... note Reference
5. ..... horn City in Italy

Answers: 1. Brainstorm. 2. Handcuff. 3. Background. 4. Footnote. 5. Legbiorn.

3-Second Twister

THREE seconds isn't long, but it's sufficient time in which to repeat the following sentence aloud. See if you can do so without error.

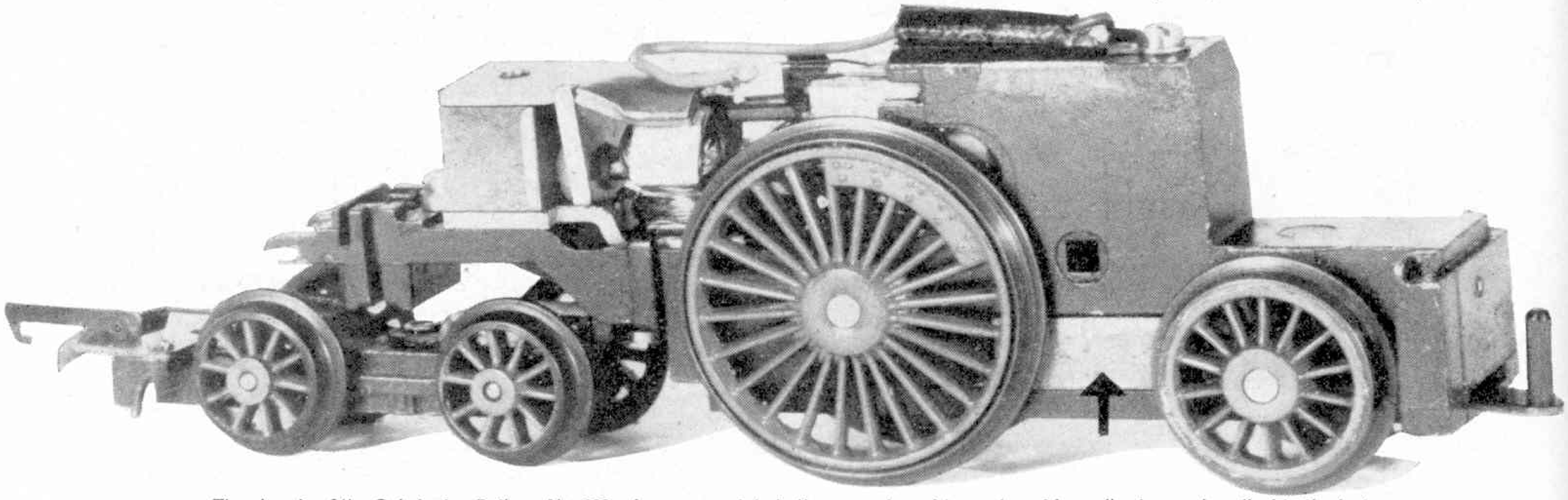
William Wood's widow whittled a little willow whistle while wending her way West.

QUICK QUIZ
Score 7
CF-CNA
1 Name the British bomber which was converted into the 'Lancastrian' for peace-time use.
2 What does this road sign indicate?
Score 4
3 Name the track system used on mountain railways.
Score 9
4 Who were the British pioneers of the electric lamp?
Score 7
5 How old is the Great Sphinx? 2000, 3000 or 4000 years?
Score 6
6 In what country would you find this dog?
Score 5

More Triang-Hornby Locomotives

by Linesman

THE capacity of your locomotives to pull as great a load as possible is a feature to which most enthusiasts attach great importance. Previously, if your locomotive had insufficient traction through a lack of adhesion weight, the only solution was to pack the body with lead to increase its tractive effort—or the number of wagons it could pull. Manufacturers have previously overcome this difficulty by adding extra weight to the chassis of their locomotives and also by casting the body in metal. This procedure invariably made the engine more expensive. Also, plastic moulding techniques enable an enormous amount of fine detail to be reproduced; far more than that obtainable with cast metal, which is also brittle and easily broken.



The chassis of the Caledonian Railway No. 123. An arrow points to the magnet used to produce Magnadhesion as described in the text

The Tri-ang Hornby System includes locomotives that are reasonably light in weight, which have plastic bodies, with the consequent high standard of detail and finish, and give excellent traction. These advantages have only been possible because of the introduction of Magnadhesion by Rovex engineers. This invention is unique to the Tri-ang Hornby range, and confers adhesion powers never before thought possible in locomotives of their weight and size.

Magnadhesion is basically a very simple but ingenious invention that takes advantage of the use of steel rails as used in the Tri-ang Super 4 track system, by literally creating a magnetic field on one or more pairs of wheels on the locomotive so that they are attracted to the steel rails. The powerful attraction still allows the wheels to roll on the rails, but will not allow them to slip, except under *very* adverse conditions. This has the effect of giving the locomotive far greater power, especially on gradients. To evaluate the effects of Magnadhesion, tests were carried out at the Rovex Scale Models factory, where a train of 25 assorted four-wheeled wagons were tested behind a variety of Tri-ang Hornby locomotives on an oval of level track. The locomotives were then timed for one complete journey round the oval. The most successful was the A1A-A1A Diesel (R.357) which took 15 secs. The Britannia 4-6-2 (R.259) and the 2-6-2T (R.59) 17 secs.; the Co-Bo Diesel Electric locomotive (R.2233) and the 4-4-0 class L1 (R.350) at 18 secs.; the 0-6-2 Tank (R.2217) 24½ secs.; the 0-6-0 (R251S) 43 secs., the 0-4-0 Dock Shunter 57 sec.

The train was then increased to fifty wagons, two locomotives in the range were still able to pull it, No. R.357, the A1A-A1A Diesel locomotive, and (R.2233) Co-Bo Diesel Electric locomotive. The latter, which is not fitted with Magnadhesion, is a very heavy locomotive and has, as an extra aid to adhesion, two rubber tyres fitted on the driving wheels. The diesel locomotive, on the other hand, is a relatively light engine which, with the aid of Magnadhesion, was also able to move the train of fifty wagons—an achievement of some merit.

Greater Realism

These tests were quite revealing in that four of the best performing locomotives were fitted with Magnadhesion —the Brittania R.259, the A1A-A1A R.375, The Tank R.59, and the L.1 4-4-0 R.350.

Among the many benefits of Magnadhesion are two that are not perhaps generally realised. The first is that there is a greatly reduced risk to the engine should it be accidentally dropped. This, though, does *not* mean that it can be deliberately maltreated, since the mechanism is an intricate piece of engineering. It also gives much greater and more realistic control at slow speeds—a very useful feature when shunting.

One of the nine locomotives in the Tri-ang Hornby range to be fitted with Magnadhesion is the 2-6-2 Tank Locomotive No. R.59. This is painted in a green livery and has Walschaerts valve gear. It is a most useful locomotive and can be used for a whole variety of operations, from local passenger to small express trains such as the 'Cambrian Coast Express', which was often pulled by one of these locomotives. They were never really designed for goods working, but in recent times have been used for slow goods trains.

The Tri-ang Hornby L1 4-4-0 locomotive falls roughly into the same category, and is used for similar types of trains. These trains are, however, older, and were built for the Southern Railway. They were rarely seen outside this area and are, therefore, an ideal choice for Southern enthusiasts. The class introduced in 1926 by Maunsell for the Southern Railway was used for fast express work, but in latter times was almost exclusively used for goods traffic. Both it, and 2-6-2T are ideal for an end-to-end type layout since either can be used for secondary passenger duties. Goods can be operated by the 0-6-0 3F tender locomotive R.251S which for many years, along with other tender locomotives of similar classification, formed the nucleus of light goods engines on the L.M.S. until they were introduced in 1906 by Deeley, the then Locomotive Superintendent of the Midland Railway. They were rebuilt by Fowler during their L.M.S. ownership, and a large number were taken into British Railways stock in 1948. The model is supplied with a crew and is fitted with Synchro-Smoke, described last month. The locomotive is finished in matt black and has a very pleasing appearance.

Another locomotive which is often used for small goods trains, but nowadays more usually for shunting, is the 0-6-0 class 3F tank R.52S. This locomotive is modelled on the famous L.M.S. 'Jinties' which were themselves the final development of a long line of 0-6-0 tank locomotives built by the Midland Railway. This locomotive has always been a favourite among railway enthusiasts and can quite authentically be used for station pilot duties or shunting.

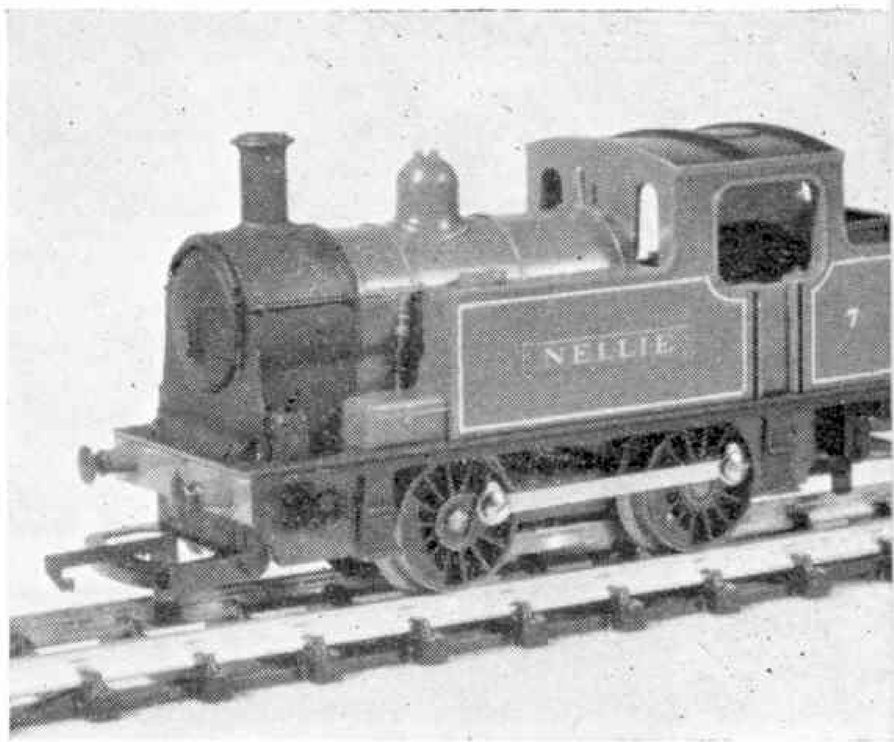
The original duties of the 3F tank are now largely carried out by the Diesel Shunter, also represented in the Tri-ang Hornby range by two models. One (R.2231) is a model from the Hornby-Dublo range, and was based on the B.R. Shunter introduced in 1955. These machines are now to be seen in large numbers in every part of Britain, usually on shunting duties in marshalling yards and in goods yards.

For light passenger suburban work another model from the Hornby-Dublo range, R.2207, an 0-6-0 tank locomotive attractively painted in green, is ideal. This model is also an engine owned by the former Southern Railway, who inherited it from the South Eastern and Chatham Railway. The class (R1), was originally introduced in 1888, to the designs of Sterling. It was later re-built however, to its present condition and forms a useful and unusual addition to any locomotive stud.

In addition to the larger 0-6-0 shunters in the Tri-ang Hornby range, three four-wheel shunters of various types are available. The most attractive in my opinion is the four-wheel British Railways Shunter R.559 which is painted green, and which bears the No. D.2907. This class of ten engines, are in use in small goods yards and are also used for other duties requiring limited power. They were made by the North British Locomotive Company in 1959, with hydraulic transmission instead of the mechanical type usually fitted to shunters.

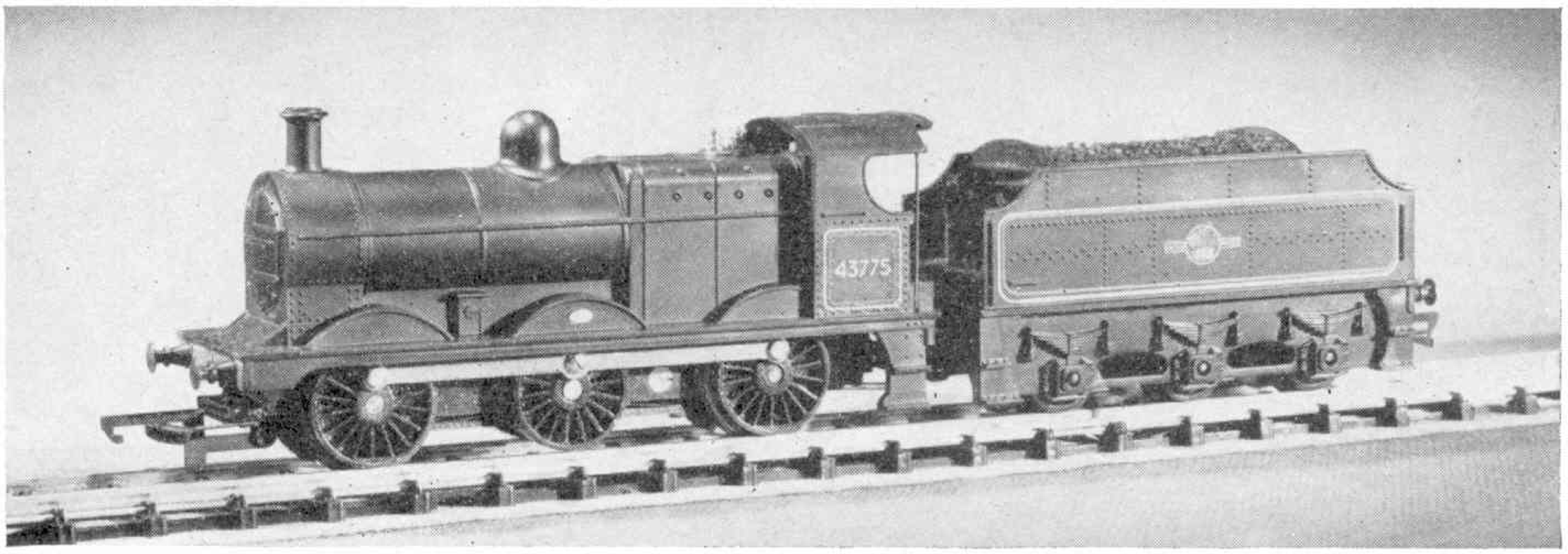
The other two locomotives in the range are basically freelance designs and are most suitable for any private industries that you may have on your layout. The first, R.355, is an 0-4-0 tank steam locomotive painted in red livery and bearing the name 'Polly', and the other engine is a four-wheeled diesel dock locomotive with the words 'Dock Authority' on its side, and also a working headlight on the front.

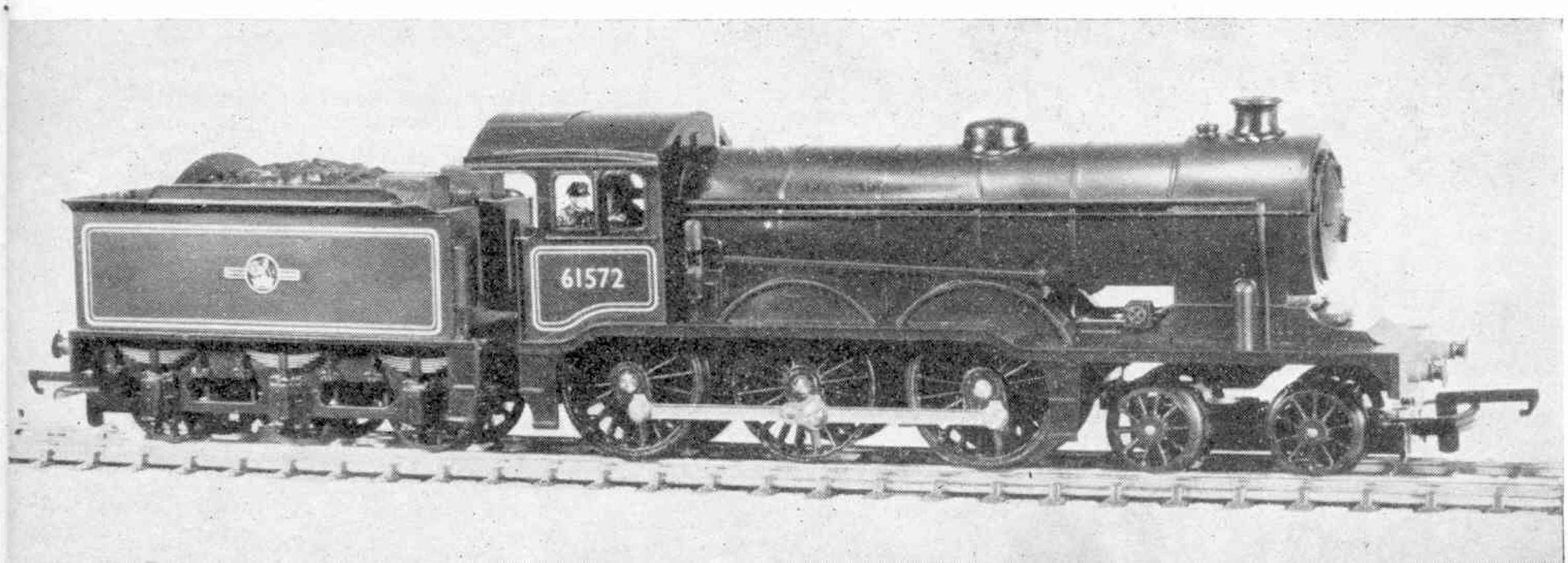
In both this and the previous two articles I have described the range of Tri-ang Hornby locomotives, and you will see that a suitable engine is available for every possible type of model traffic that you are ever likely to operate over your layout. Locomotives are continually being added to the range, and occasionally withdrawn to make room for new types. Indeed several of the earlier locomotives— the 'Princess' 4-6-2 for example—are now collector's pieces and are no longer obtainable. One point that must be emphasised however, is that to provide as great an interest as possible in your layout, it is important to run as many types of trains as your locomotive and rolling stock can provide, and if feasible, to formulate a simple form of operating timetable or sequence. In this way you will be obtaining the greatest possible fun from your locomotives and rolling stock.



The Tri-ang Hornby 0-4-0 Tank Locomotive 'Nellie'. The latest version, 'Polly', is now available in red livery

Below (top photo): the Tri-ang Hornby 0-6-0 Class 3F Tender Locomotive No. 251 S. This locomotive is fitted with crew and Synchrosmoke. The bottom photograph shows one of the latest additions to the Tri-ang Hornby range, the B 12 Class 4-6-0 Locomotive No. R 150 S., also fitted with crew and Synchrosmoke





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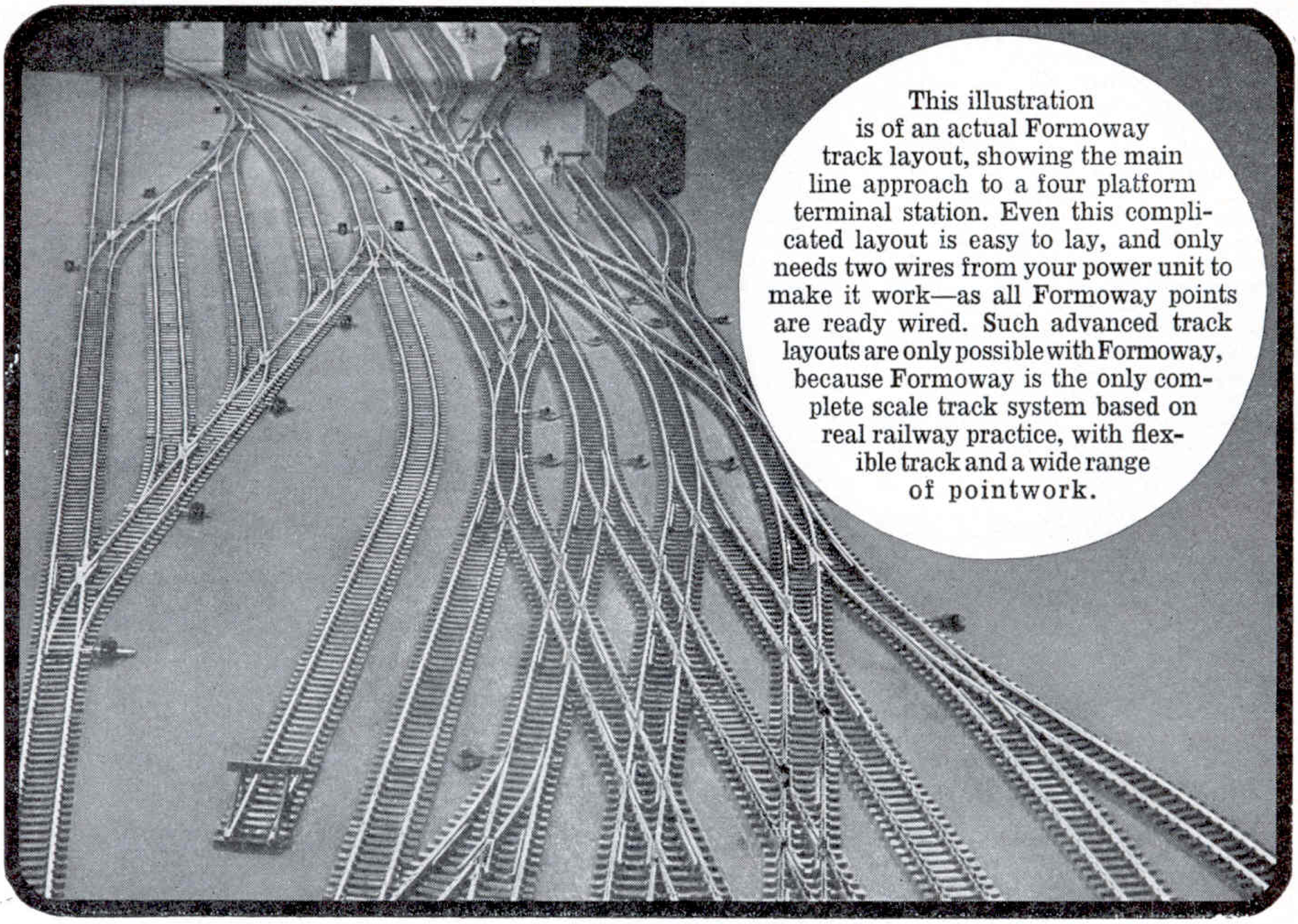
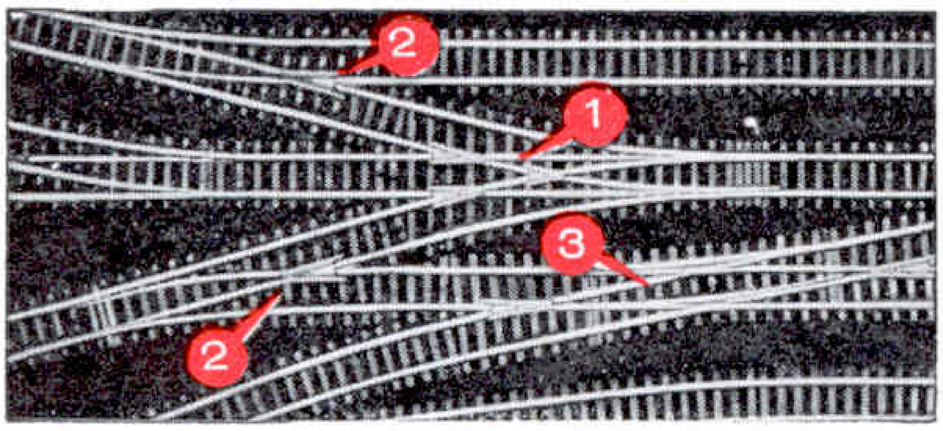


This illustration is of an actual Formoway track layout, showing the main line approach to a four platform terminal station. Even this complicated layout is easy to lay, and only needs two wires from your power unit to make it work—as all Formoway points are ready wired. Such advanced track layouts are only possible with Formoway, because Formoway is the only complete scale track system based on real railway practice, with flexible track and a wide range of pointwork.



Here is a top view taken from the above layout, showing a concentration of points, only possible with Formoway.

1 Threeway Point (2 ft. radius) shown here in an ideal position on the layout. This unique point is only available from Formoway and represents a major contribution to model railway enthusiasts. cost 32/1.

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3 Single Slip (3 ft. radius) used here to span the main approach roads. cost 28/-.

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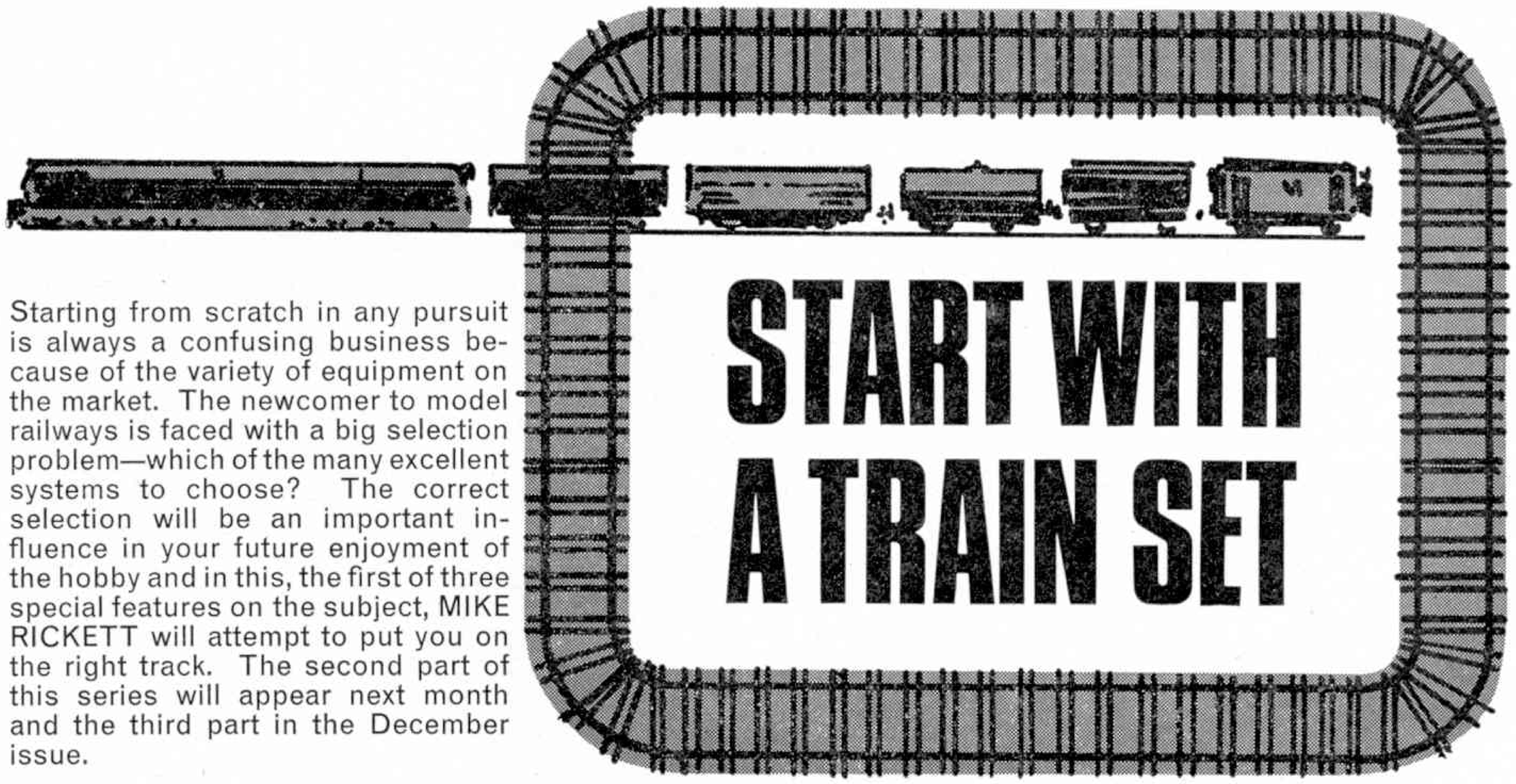


START WITH A TRAIN SET

Starting from scratch in any pursuit is always a confusing business because of the variety of equipment on the market. The newcomer to model railways is faced with a big selection problem—which of the many excellent systems to choose? The correct selection will be an important influence in your future enjoyment of the hobby and in this, the first of three special features on the subject, MIKE RICKETT will attempt to put you on the right track. The second part of this series will appear next month and the third part in the December issue.

The enormous popularity of model railways as a hobby is due in no small measure to the fascinating diversity of its appeal, and also, to the relatively small outlay that need be incurred when beginning. It is of course possible, as in most hobbies, to spend a great deal, but usually, a model railway of moderate size, yet large enough to maintain interest, can be built for only a few pounds.

This is particularly so if one is willing to do a certain amount of constructional work oneself. The creation of a miniature world forms a major part of the interest in model railways and although practically all ones rolling stock and accessories can be bought, a greater part of the work is often the result of the builder's own ideas and skill.

Without a doubt the most popular way to start in the hobby is to buy a train set, (unless of course you can arrange to be given one as a present!) In either case, this basic train set can be used at a later date to form the basis of a larger system. With care, many items from the catalogues of a variety of different manufacturers can be utilised. The potential here is quite fascinating for it is possible to include items of rolling stock and other features from various sources, thus making *your* layout quite unique—different from anyone else's system.

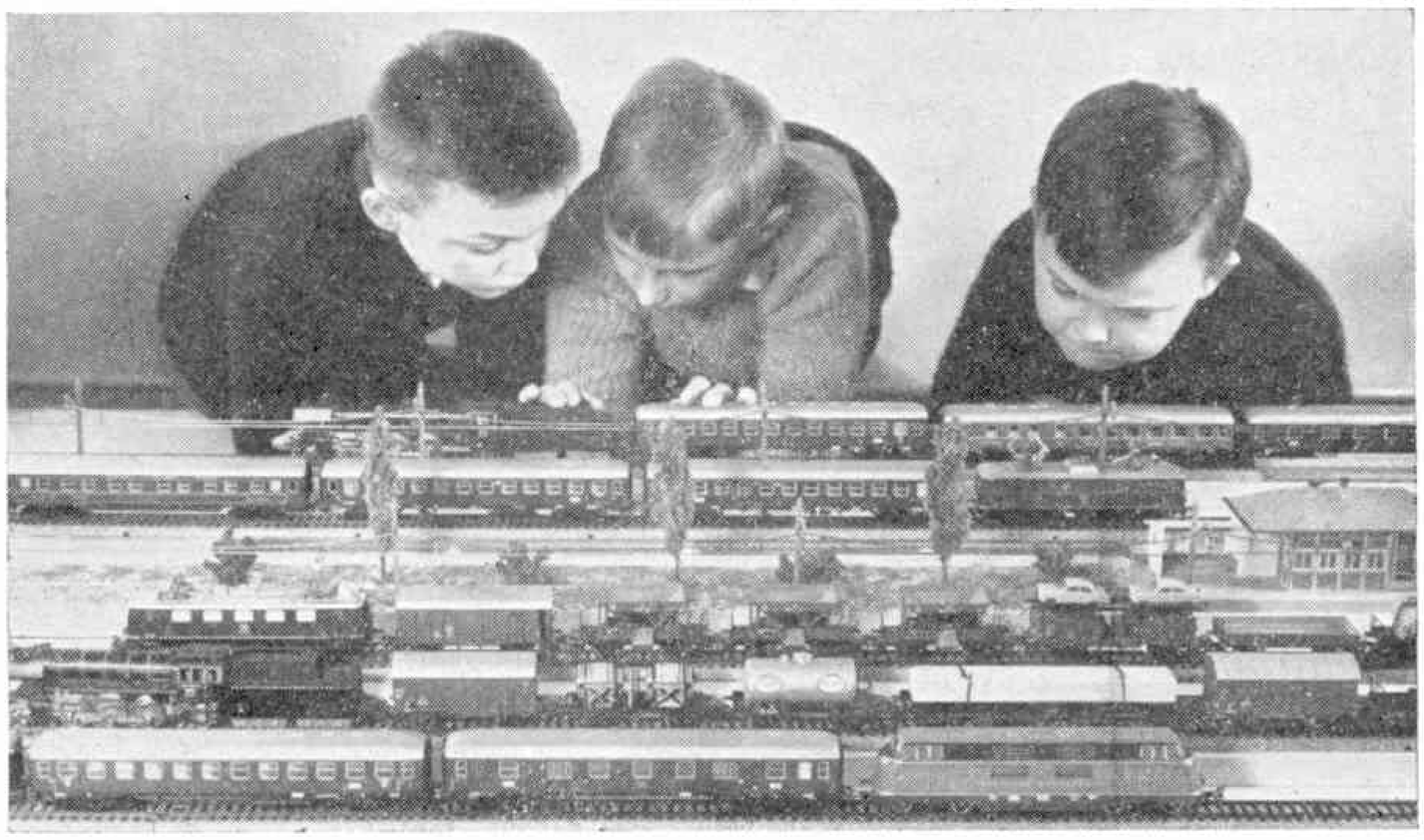
To the beginner however, it is often advisable to gain a little experience from the basic train set before embarking on any of the more ambitious projects that I will deal with during the course of these three supplements, and I intend this month to look at the basic train set, its contents and scope.

One of the advantages of starting with a reliable train set is that much of the uncertainty that can be experienced when beginning, is avoided. You can at least be certain that any accessories bought at a later date for your train set, fit properly with the equipment you already have, and for this reason it is advisable to ascertain when buying a train set, that a reasonably comprehensive range of accessories is available, and also that a servicing arrangement exists should you require spare parts, or other assistance with your purchases. A good service organisation, and in addition a comprehensive range of extra accessories is always worth paying a little extra for, although in all fairness I should say that the two are not always synonymous. All the manufacturers mentioned in this supplement have both, and are, in every respect, producers of good, reliable equipment, which the customer can be sure will give long and satisfactory service.

Tri-ang Hornby Goods Trains

Broadly speaking, train sets divide themselves into two categories, passenger and goods. Each has its own attraction, and generally a number of different types are made available by each manufacturer. The Tri-ang Hornby range for example has three very attractive and reasonably priced goods train sets, the 'Freightmastermaster', 'Pick-up-goods', and Car-a-belle'. The components in each of these sets can form useful additions to any layout, irrespective of the number of accessories that are added at a later date. The 'Freightmaster', is the largest of the three sets, has a horse box; cattle wagon; milk tank; container wagon; three-container wagon; drop side wagon; brake van; and a model of the B.R. A1A —A1A diesel locomotive. This selection of rolling stock is sufficient to create many interesting shunting movements providing a few modest additions to the basic track supplied are made. The smallest goods set in the Tri-ang Hornby range—the 'Pick-up-goods' would of course need some additional items of

Part of a model railway built from Marklin components and accessories, showing a few of the large range of locomotives and rolling stock available



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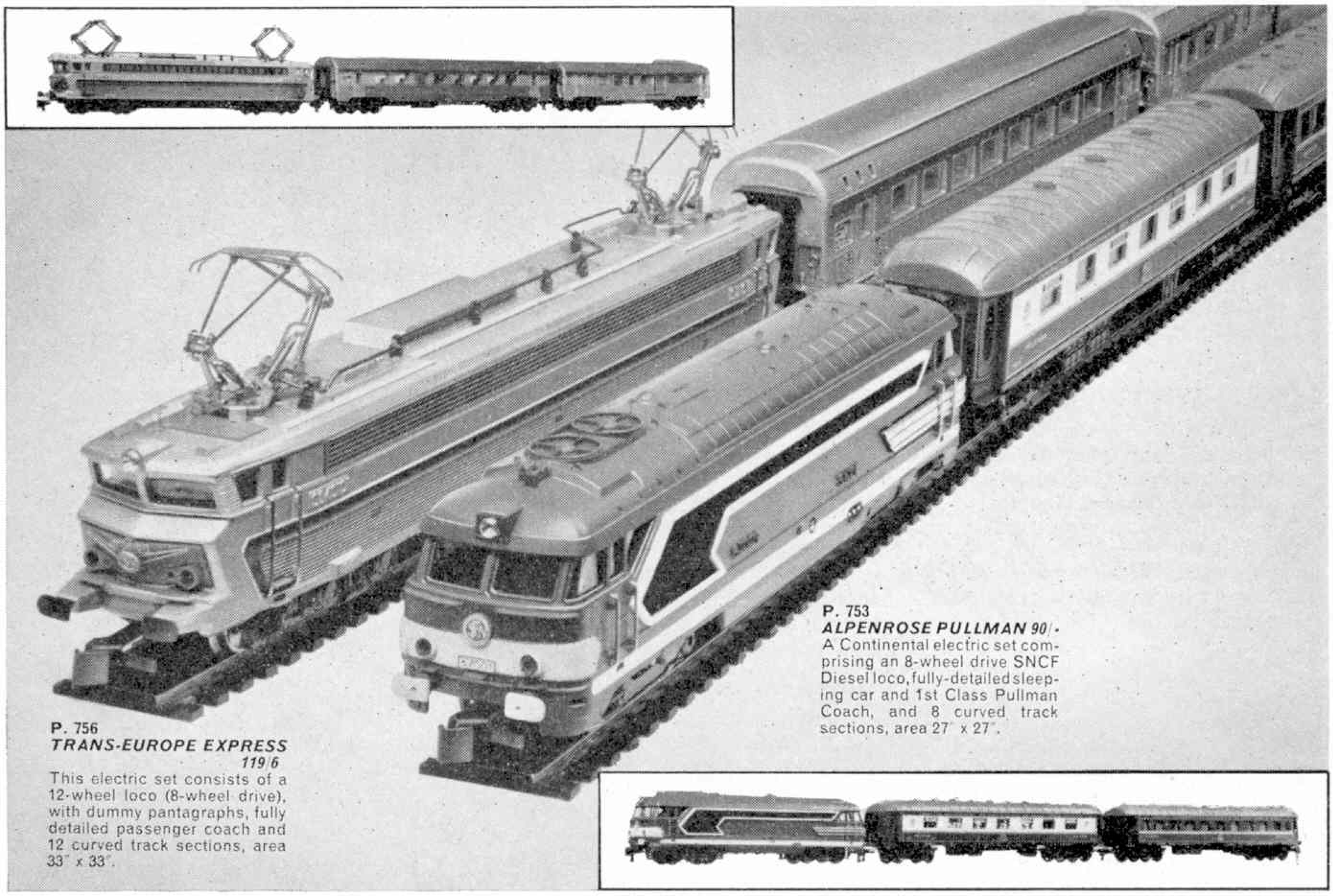
from PLAYCRAFT RAILWAYS



P. 753
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A Continental electric set comprising an 8-wheel drive SNCF Diesel loco, fully-detailed sleeping car and 1st Class Pullman Coach, and 8 curved track sections, area 27" x 27".

P. 756
TRANS-EUROPE EXPRESS 119/6
This electric set consists of a 12-wheel loco (8-wheel drive), with dummy pantagraphs, fully detailed passenger coach and 12 curved track sections, area 33" x 33".

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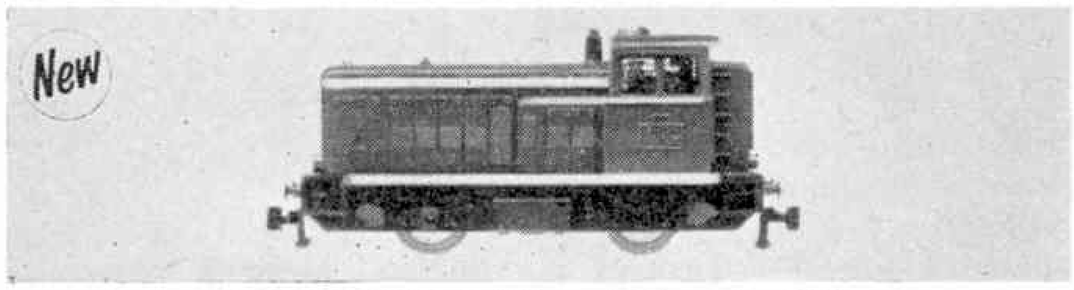
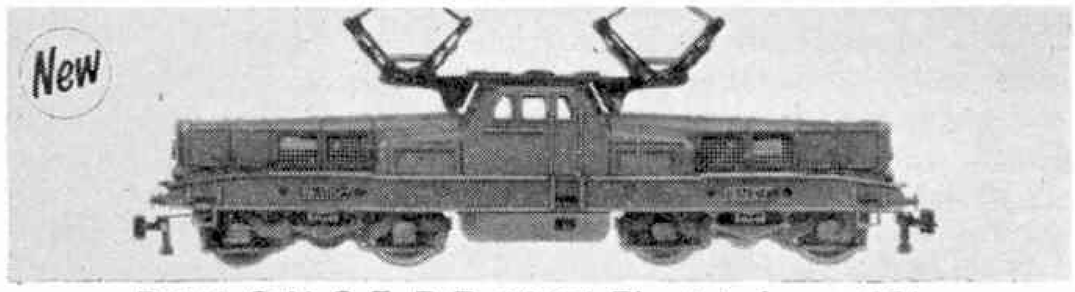
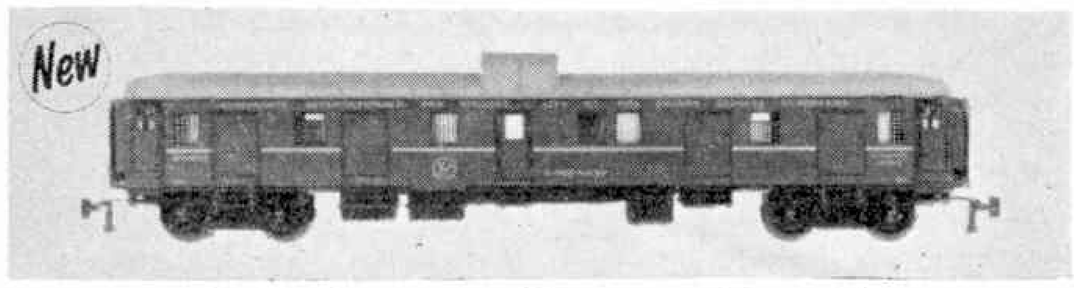
OO/HO GAUGE **Playcraft RAILWAYS**



P.840 S.N.C.F. Diesel Shunter 22/-



P.842 S.N.C.F. B.B. 13001 Electric Loco 65/-



P.460 Continental Luggage Van 10/6

rolling stock before the shunting or marshalling of a train could become an interesting operation. The set is however cheaper and three wagons are provided, including the brake van, with the blue 'Nellie' 0-40 tank engine. Once again the rolling stock can be used to form the basis of a larger fleet of rolling stock at a later date. The 'Car-a-belle' set is one of the Tri-ang Hornby special sets and includes double deck bogie car-carrying wagons which are supplied with six cars each and the set includes the 'Jinty' 0-6-0 tank locomotive. This type of set does not readily lend itself to shunting operations, but does undoubtedly give an added interest to any layout, especially if extra stock is added at a later date.

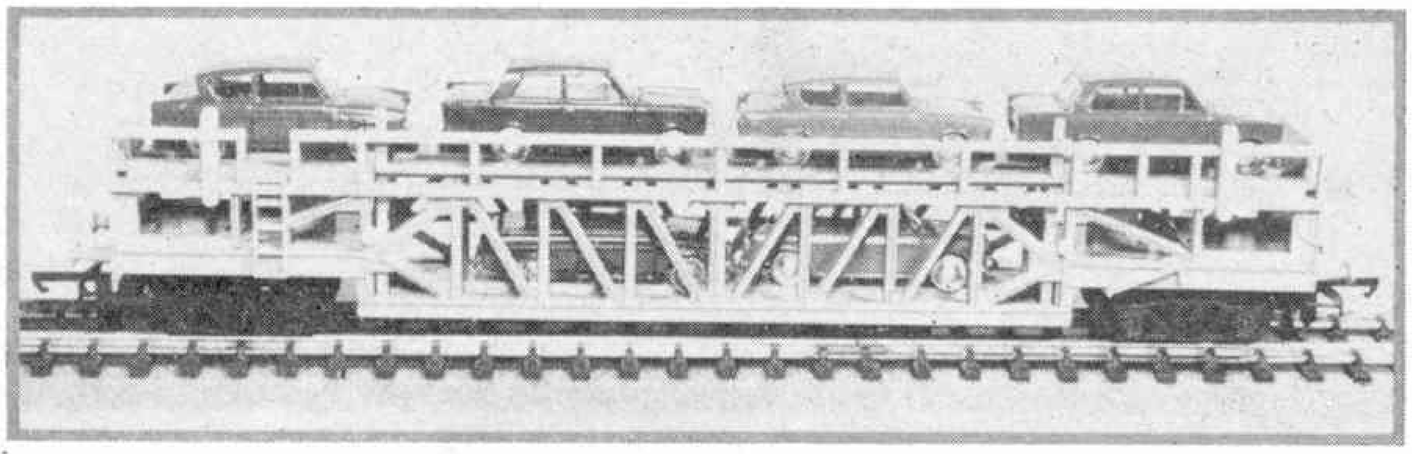
Rolling Stock

Most trains are supplied with between three and seven items of rolling stock—according to the price of the set. In nearly every case it is desirable to add to these first items of rolling stock as the layout grows from the basic oval of track. If for example four wagons of different types are supplied with your train set—a cattle wagon, box van, open wagon, and a brake van, and your layout consists of two or three sidings on which shunting can take place, an additional six wagons can be purchased. These could consist of fish, meat, refrigerator or goods vans, or additional open wagons of various types. The remainder of the stock might consist of a selection of the many special wagons available; welltrol, tank wagons, grain etc. It should always be remembered that on a full size railway, more open wagons and goods vans exist than the other special types, and for the sake of realism it is worth preserving this balance.

Marklin

In addition to the English manufacturers of boxed train sets, a number of Continental products are available. Marklin, which has for many years been well known for the reliabilty of its equipment, produces a very comprehensive range of Continental prototypes. A complete model railway can be built up using Marklin track, signals and other accessories. There is also, I understand, a possibility of British designs appearing in due course.

Before describing a few of the Marklin train sets, the method of current collection may be of interest. This is supplied to the track by either centre—stud contracts, or alternatively by the Marklin overhead catenary system, the current returning via the two outside



The unusual Tri-ang Hornby bogie car-carrier as supplied in the 'Car-a-belle' Set is shown here complete with six cars

running rails. Locomotives of other manufacture cannot therefore operate over Marklin track, unless they are specially converted. This, however, is not really a disadvantage, since the range of locomotives available is very comprehensive, and is extended every year.

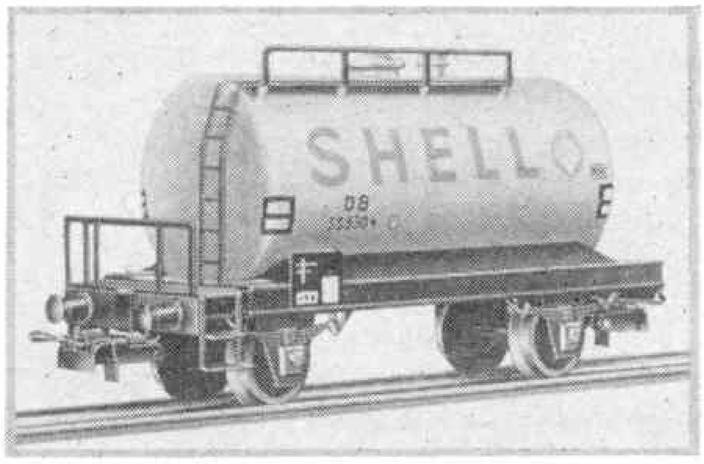
Recent introductions include two basic sets—one goods and one passenger. The goods set is supplied with two four-wheel wagons, a low sided open wagon, and a cauldron type tipper. The locomotive is a highly detailed German Federal Railways 0-6-0 class 89 engine. Although the rolling stock provided is thus limited, the items available separately allow for considerable expansion later on.

Fleischmann

An equally famous Continental name is Fleischmann, who produce four train sets, each of which come complete with power unit.

The Fleischmann railway system operates on the '2-rail' principle and the sectional track system available includes a wide variety of points—seven in all, including an intricate double slip formation. They also have standard right and left hand turnouts, two types of crossings, and both right and left hand curved points. All points are available either hand or electrically operated, and a feature that may be of interest to many of you, is that all track and points are universal in their operation.

Among the range of train sets are two that I would recommend to anyone contemplating a model railway of medium size, and who wishes to buy a set that will be of use on the final layout. The sets concerned cost £9 16s. 0d., each, and the passenger version, which has three different four wheel coaches in dark green livery, is intended to represent branch line or suburban practice. The locomotive is an 0-6-0 tank and has operating valve gear, and the indentations on the coupling rods painted red, as are the faces of the wheels. A very attractive train, and



One of the many wagons suitable for adding to the basic selection given with the Marklin train set is this colourful Shell Tank Wagon

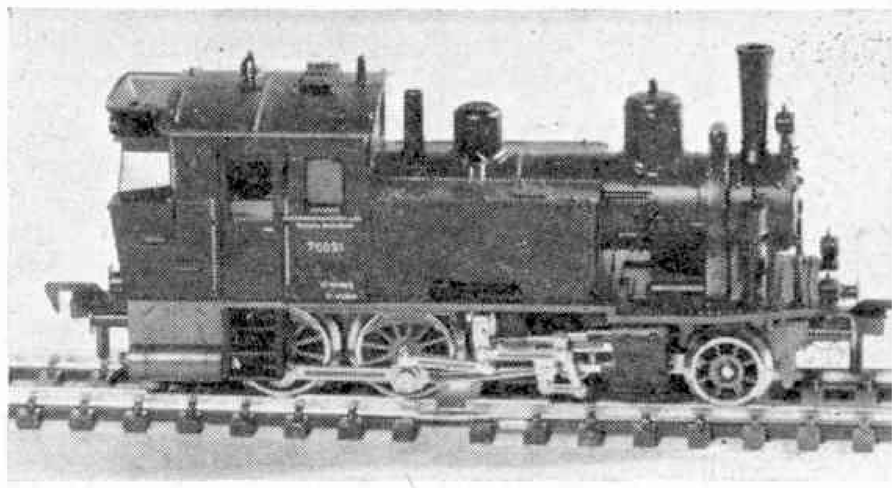
one that is suitable for inclusion in any layout irrespective of its size.

The goods set has a different type of black 0-6-0 tank locomotive, also with operating red painted valve gear. Three items of rolling stock are supplied, a yellow tank wagon, steel mineral wagon and a covered goods van.

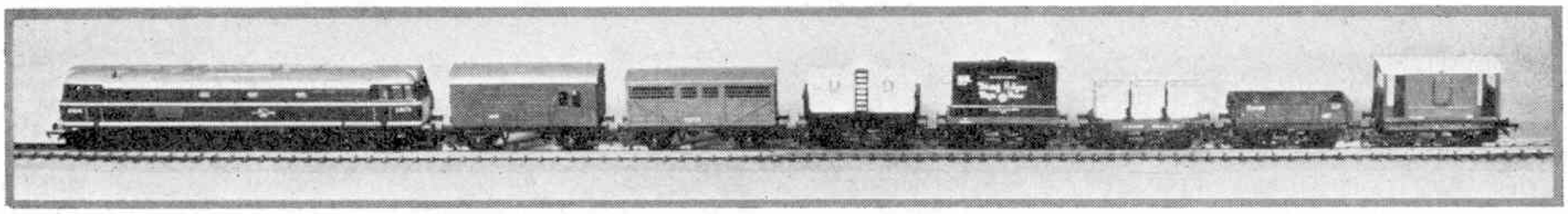
Goods Trains

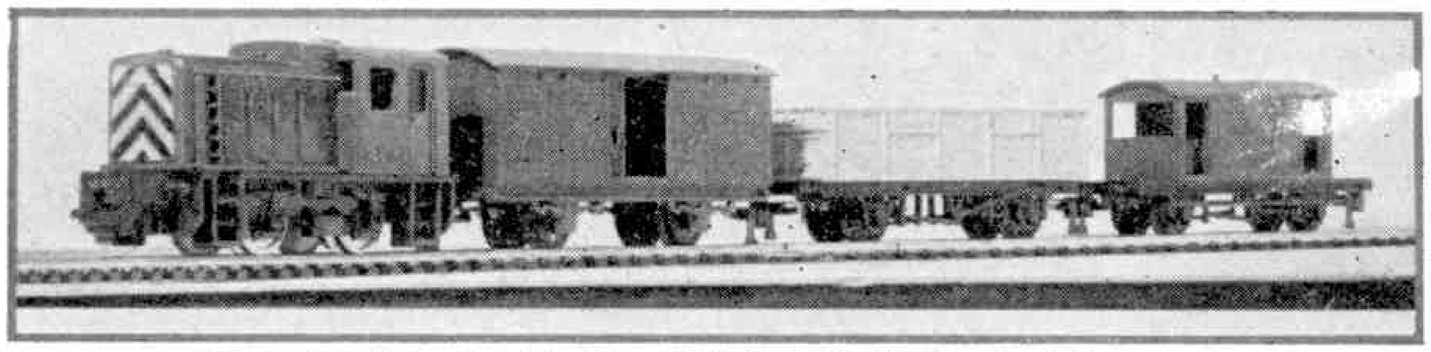
When buying a train set of the goods type, it is desirable if your interest lies in shunting movements, to choose a set that has the maximum number of wagons. In this way it will not be necessary for many extra items of stock to be bought immediately—although it is inevitable that extra wagons will be needed the larger your layout grows. It is however important to realise that a layout should

Fleischmann enthusiats have a wide range of locomotives to choose from when they extend their first train set. A particularly appealing one is this 2-4-0 tank locomotive



The Tri-and Hornby 'Freightmaster' train set described in this supplement is shown here complete with AIA-AIA Diesel Electric Locomotive. The selection of rolling stock supplied in the Set is ample for most small layouts and can provide many interesting shunting movements





The train sets produced by Playcraft include the 'Clapham' set shown here. This is supplied with its own oval of track and three items of rolling stock

not be overcrowded with stock which will only block and hinder train movements. A good rule of thumb method of ascertaining the number of wagons that your layout is capable of absorbing, is to allow, for every siding, about four or five wagons. An important feature of any train set is that it should operate faultlessly for an unlimited period of time, and that it should, as far as possible, be simple to wire, and install. Even in the Marklin and Fleischmann systems, the wiring is quite simple despite their sophisticated electrical control.

Playcraft

The Playcraft Railway system, which is two rail, working off twelve volts D.C., in common with other makes is also very simple to wire up. This firm specialises in the production of trains for the younger enthusiast, although many items in their range are ideally suited to any model railway. For the beginner the 'Snow Hill' or 'Stratford' sets are ideal, and are each supplied with four items of rolling stock. A car carrier, bogie tank wagon, bogie brick wagon, and brake van, is supplied in the 'Stratford' set, and a cement wagon, tube wagon, open wagon and brake van, in the 'Snow Hill' set. The locomotives are quite good representations and the two sets I have just mentioned, have an 0-4-0 tank locomotive, and a bogie diesel locomotive. The Playcraft system, as with others, has its own track system with a range of six points; 12¾ in. radius right and left hand, 15 in. radius right and left hand, and two types of diamond crossing. The 15 in. points are also available electrically operated. Each train set is of course supplied with its own oval of track, and a wide range of additional rolling stock is available.

Three passenger train sets are also available in the Playcraft range—two British and one Continental.

Tri-ang Hornby Passenger Trains

Tri-ang Hornby's model railway system is undoubtedly the largest manufactured in this country. The system operates on the two rail system at 12 volts D.C., and an overhead catenary system is also available for the two pantograph locomotives, which can also operate from the track power supply in the normal manner. The Co-Co EM2 locomotive supplied with the 'Highwayman' set is one of these, and although no catenary equipment is supplied with the 'Highwayman' set, it can be added at a later date simply by plugging the appropriate accessories into the ingeniously designed track base.

Tri-ang Hornby also produce a range of passenger train sets, all of British design, including locomotives from their popular range. The 'Highwayman', also includes two B.R. passenger maroon coaches, and an oval of track measuring 52 in × 32 in.—the largest in the Tri-ang Hornby sets. Both this and the 'Blue Pullman' train set are ideal for any layout intended to have an express train. The latter, a model of B.R.'s crack express consists of three vehicles—a power car, parlour car and trailer car—and is, as the name implies, painted in the very attractive B.R. blue livery specially designed for this train.

Express Trains

In addition to the express trains from the Continental manufacturers already mentioned, Marklin also produce train sets of the express type. One that I particularly like is the three-coach electric express set, also intended for operation on an overhead catenary system. The locomotive of this train is painted in a blue livery and has two four wheel bogies. Two of the coaches are models of the German Federal Railways, type B4, and the remaining coach is a model of the dining car designed by the German Sleeping Car Co. The total length of the train is just over three feet, and a reasonable length of run is therefore required if its operation is to be of lasting interest. Generally speaking, passenger trains do require rather larger layouts than their equivalent goods sets, since they cannot be shunted, and in fact their interest is derived from operation for long periods over as great a stretch as possible.

Branch Line Trains

Branch line trains are represented by several sets made by most of the above manufacturers. Marklin have a starter set consisting of an 0-6-0 loco with two beautifully detailed four wheel coaches in a green livery. Fleischmann have a slightly larger set with three coaches, also painted green, but this time with an 0-6-0 locomotive, finely detailed, with working valve gear. A very attractive set. Fleischmann also produce a rather cheaper set with an 0-6-0 locomotive and three coaches, all four wheel and nicely detailed.

Baseboards

Although most train sets can be laid out on the table, and then taken apart again after use, it is desirable, if you intend taking your hobby seriously, to build a simple baseboard as soon as possible so that scenic features, accessories and other effects can be included more or less permanently in the model railway. The construction of a baseboard is quite a simple matter, and is well within the capabilities of anyone with a little knowledge of woodwork.

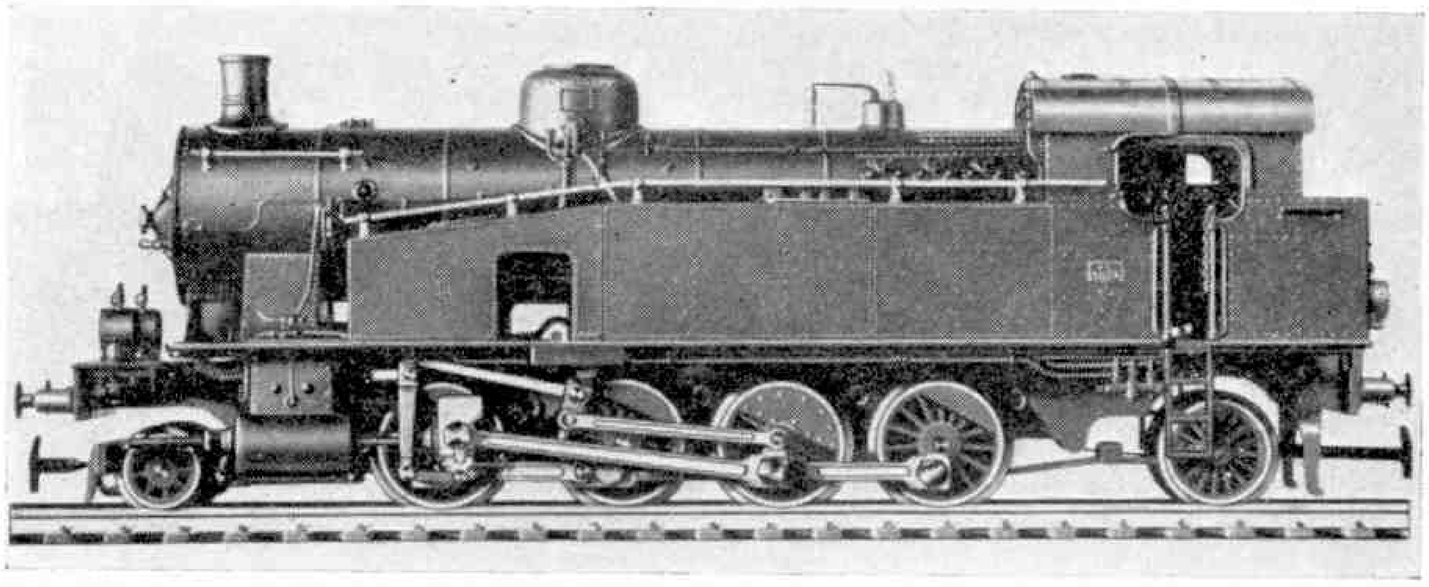
Your first baseboard need only be a flat table-top structure. More complicated ones are quite unnecessary until your layout begins to grow larger, and includes gradients. Whatever the size of your baseboard—6 ft. × 4 ft., 8 ft. × 4 ft., etc.—it will need considerable bracing beneath the surface, and for this 2 in. × 1 in. planed white timber is ideal. Full details of materials and constructional methods were described and illustrated in last month's model road racing supplement.

Universal Track

Many of you prefer to build up your layout from separate components and, instead of using a sectional track, which by its very nature has certain disadvantages, use one of the many flexible track systems available to-day. The types of layout that can be built in this way are literally limitless, and if used in conjunction with a number of makes of locomotives and rolling stock, a whole new horizon is opened.

There are, however, certain snags which have to be borne in mind when planning a flexible or universal track system that allows every make of equipment to run over it. For instance, every manufacturer uses his own type of coupling. It is therefore necessary for anyone intending to build a railway of this type to standardise on *one* coupling system, and to convert all other rolling stock to suit. This is, however, only

Here's the Rivarossi Italian Railways 2-8-2 tank locomotive, suitable for freight and light passenger trains

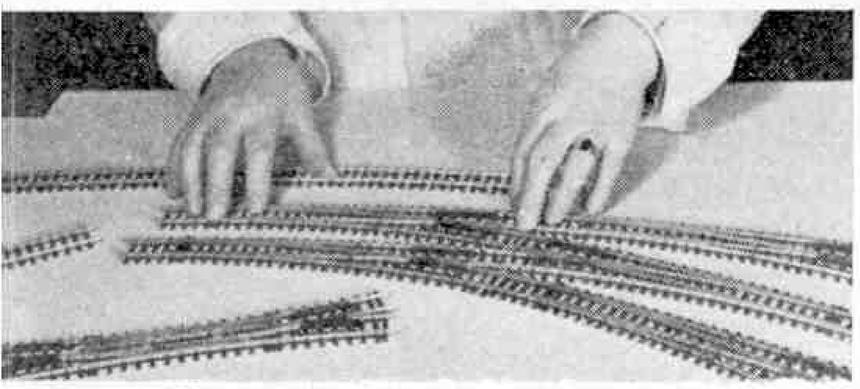


one disadvantage and must be weighed against the many real advantages. Once you have gained a little experience with your first train set, you will find yourself envying those enthusiasts who own a layout with universal track. Flexible track can be used to form curves of any radius, straights of any length, and gives the builder complete freedom as far as track planning is concerned, since one is not restricted to one specific radius.

Graham Farish

The Graham Farish track system is one such universal system, and the track they produce is in three foot lengths which can, of course, be curved to any radius, and cut to any length. A little more skill is required to lay track of this sort, and I shall be dealing with this in greater detail next month. The same firm also produce a number of locomotives and beautiful Pullman coaches.

The range of points produced by Graham Farish is very comprehensive, and includes a double slip, single slip, three way point, diamond crossing, curved point, Y point, 2 ft. radius point, and 3 ft. radius point.



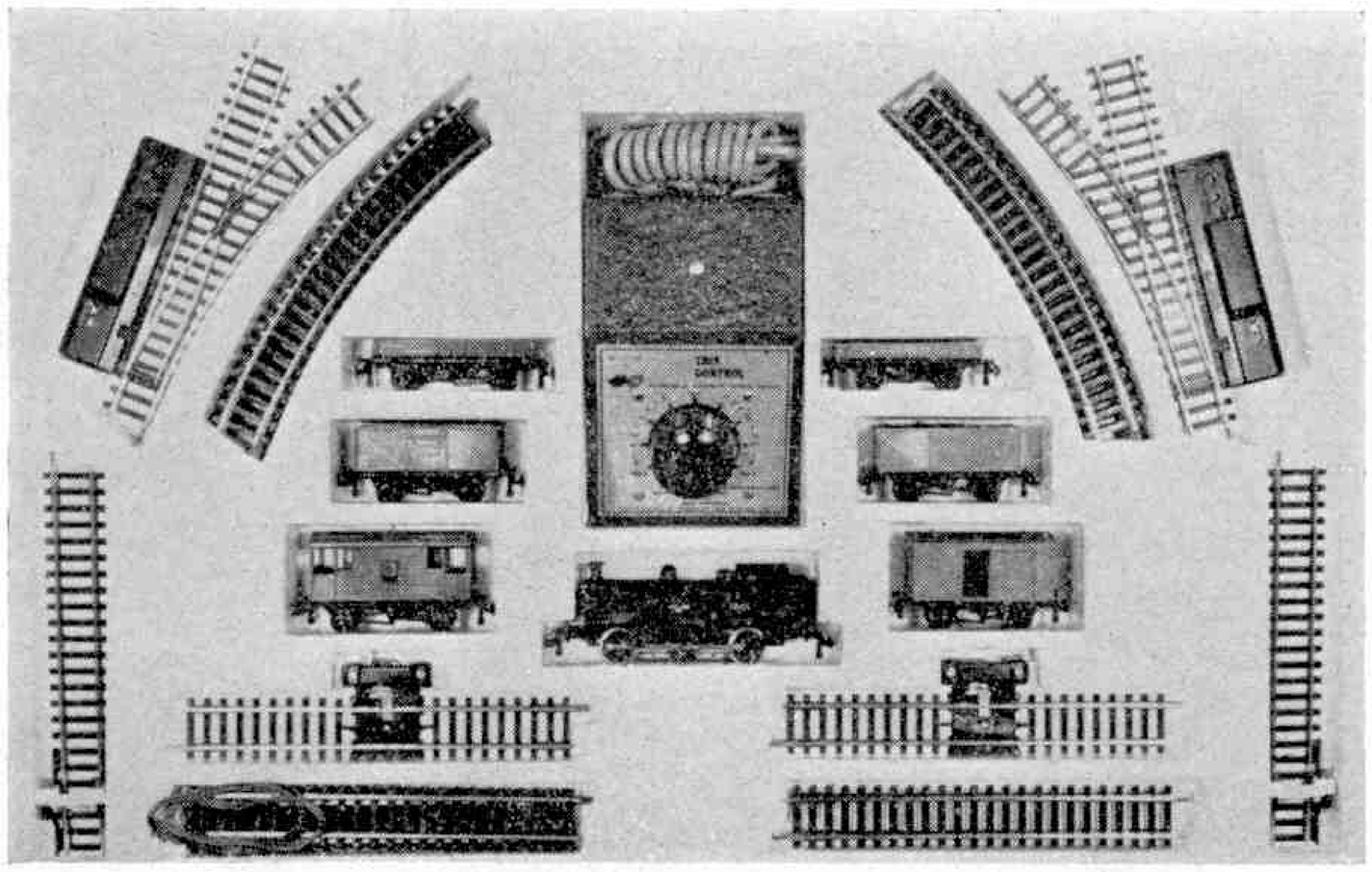
The realism of the Graham Farish track system is well illustrated in this photograph of some interesting pointwork

Trix & Rivarossi

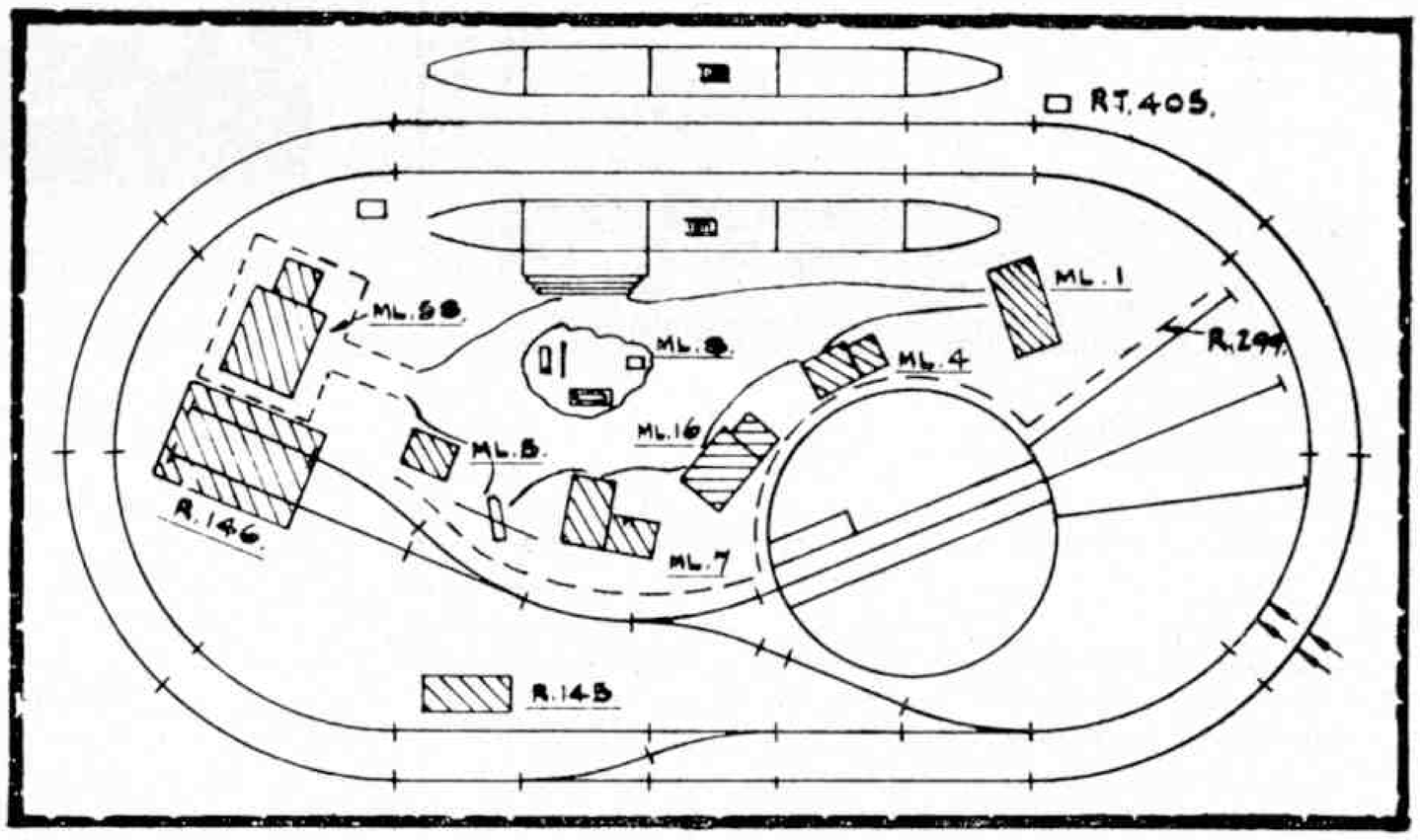
British Trix Ltd., in conjunction with their German associates, have a large range of locomotives and rolling stock of both British and German design. The Trix 0-6-0 T, Class E 2, or the G.W.R. 0-6-2 T locomotives are an excellent choice for the beginner. An alternative is one of many Rivarossi locomotives imported into this country by the Peco Patent Product Co. Their range is so large that it really is difficult to give suggestions, but next month I shall describe some of the locomotives available from this company.

Layouts

Most train sets are supplied with an oval track which varies in size according to the manufacture of the train set. Tri-ang Hornby sets, however, are supplied with four different sizes of oval, (the smallest being a circle) which requires a space 81 centimetres square, and the largest 131 cm. × 81 cm. All boxed train sets contain an oval of track that will lie somewhere between these two measurements, except, of course, if you choose to build up your own set with individual components, in which case you will be free to choose the size and design of your layout. As far as the beginner is concerned, an oval can become boring in quite a short time and it is well worth extending to something a little more ambitious as soon as possible. The easiest way of doing this is to add a number of sidings on either the inside or outside of the oval to allow shunting to progress. Before doing this, however, it is necessary to lengthen the basic oval by at least two or three straight rails, if only two rails are supplied in the box. When this has been done the next step is to introduce points to form the sidings, or alternatively to form a crossover or a second oval of

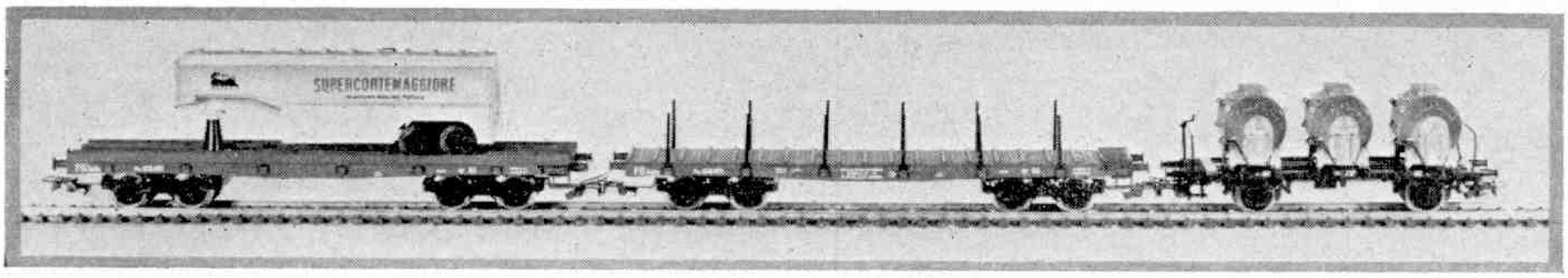


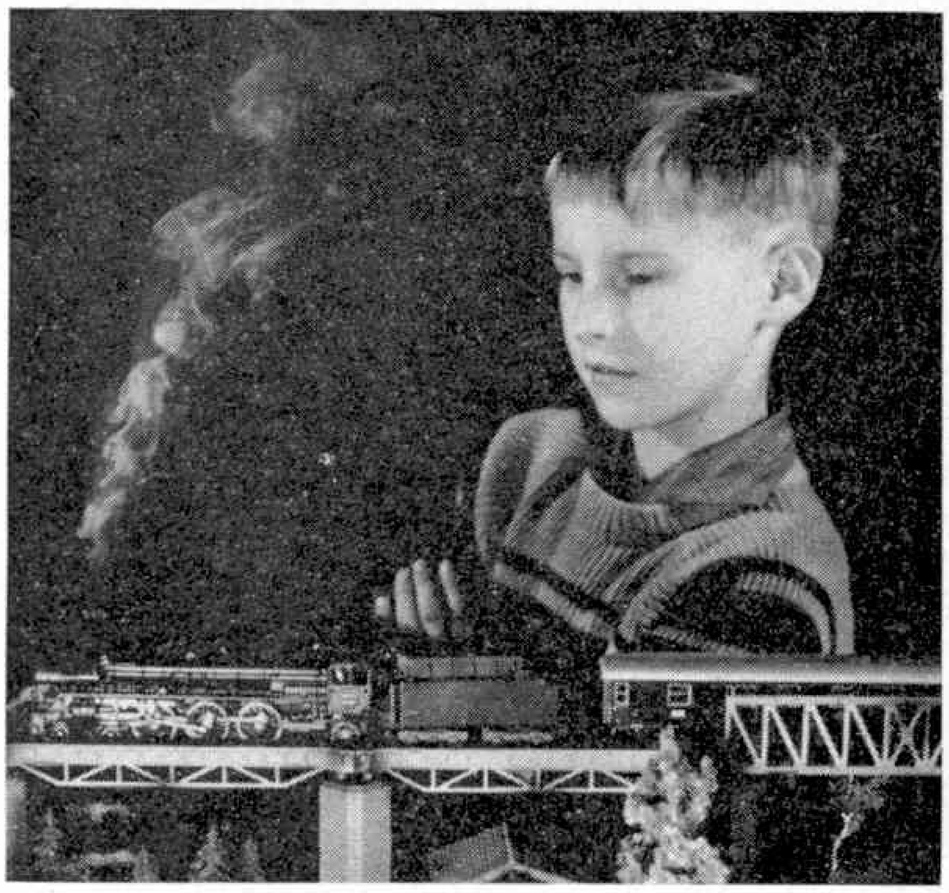
A flying start is given the lucky owner of this Trix De Luxe Goods Train Set which comes complete with 6 wagons, 2 points and power unit! It costs £8.8.0d



A small layout measuring 4 ft. 6 in. by 4 ft. which can easily be developed from the basic train set oval. The plan is intended for the Hornby-Dublo track system, but the basic design can be used for any make of sectional track

Rivarossi gives enthusiasts a wide range of Italian, German and American rolling stock to choose from. This photo shows an Italian Bogie Flat Car, an Italian Railways Long Bogie Flat Car with piggy back container, and a German Flat Car with three containers





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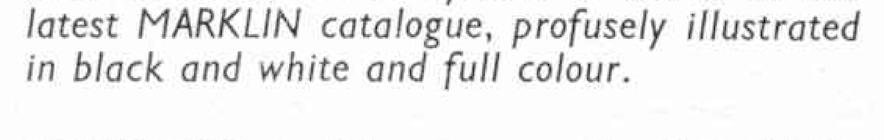

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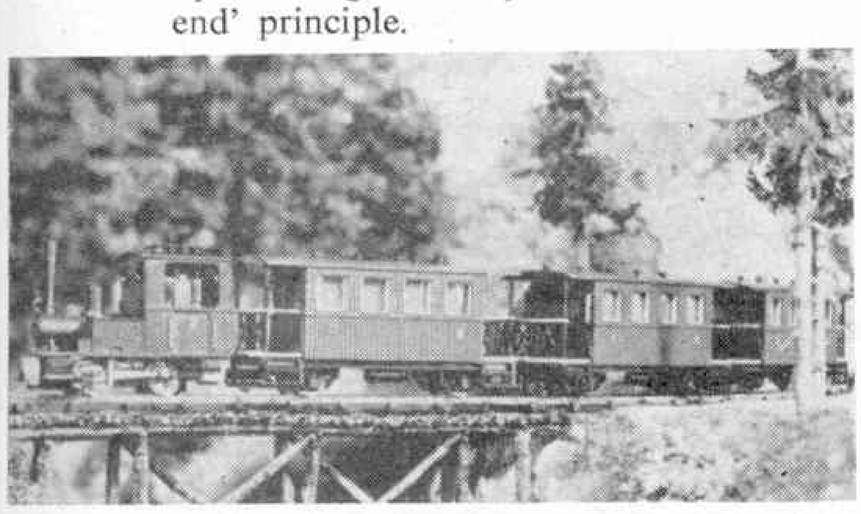
track outside the first if you wish to run two trains simultaneously.

The plan illustrated on page 25 is an interesting layout of the double oval type with an interesting array of sidings and a turntable. This can quite easily and cheaply be enlarged from the basic oval of track supplied by adding further straight rails of various lengths, including some the equivalent lengths of points if you do not intend adding the points immediately. The next step would be to build up the outside oval by adding the crossover points, and the appropriate rails for the oval. This would now allow the running of two trains at the same time, although the shunting or marshalling of stock could not proceed until the sidings are also in position. This would be the final step in the assembling of the track work, and would commence with the point leading off the inside oval to the engine shed, followed by the turntable road, probably the most expensive item.

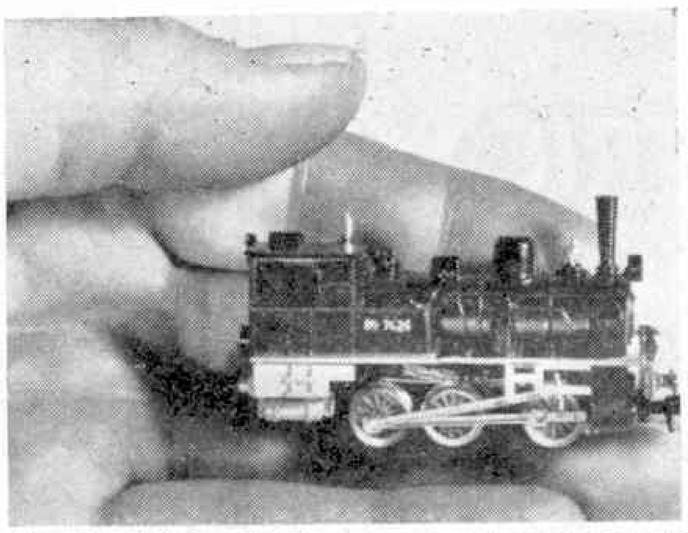
It is not essential for the entire layout to be built at once, but to maintain interest it is desirable that trains are able to run at every stage of the proceedings. Many different types of oval layouts can be built, but some enthusiasts prefer to give a greater sense of realism by building their layouts on the 'end-to-end' principle.



This attractive scene shows the diminutive 0-4-0 Egger Bahn tank locomotive pulling a train of coaches over a trestle bridge

Smaller Gauges

In addition to the large number of 00/HO gauge train sets, a number of other sets are made for smaller gauges. Examples are the Tri-ang TT 12 mm. gauge system, the Arnold Rapido system imported by the Peco Patent Product Co., the Lone Star system, Mini-Trix and the new German made Egger Bahn "works" railway system. All but the Egger Bahn, and Arnold Rapido systems have train sets available in this country, and their equipment can, of course, be bought separately in component form. All these systems operate from 12 V D.C. in the normal way, and they can either be used on the track systems produced for them, or on a flexible track system in the same way as the larger 00 systems. Only one universal track system is made for the 9 mm. gauge Arnold Rapido, Lone Star, Mini-Trix and Egger Bahn, and that is produced by the Peco Patent Product Co. Ltd, who also produce a 9 mm. narrow gauge



The Arnold Rapido N gauge model equipment is wonderfully detailed, this locomotive being just over 2 in. long. It is intended to be operated over the Peco Streamline track system

flexible track system for 4 mm. scale models.

The advantage of building a model railway from TT or N gauge is not so much that smaller curves can be included in the layout, although this is true to a certain extent, but rather that an existing layout design can be given more space to ease curves, give longer sidings, more room for scenery, and a greater length of run. N gauge is particularly useful for creating a convincing overall effect, although it can of course be used for building smaller layouts which is what, in point of fact, it was designed for.

Lone Star

Lone Star who were the first in the field with 000, or N, gauge equipment, have now increased their range to include Trans-Continental models as well as two motorised British diesel locomotives. Two of the seven train sets are specifically intended as starter sets, and the first, E.L. 51, is a goods set which includes the B.R. D5900 locomotives. Two of their seven train sets also an oval of track requiring a space of 3 ft. by 2 ft. This can of course be extended at a later date with the various items of points and track that Lone Star have available. One of our illustrations shows a layout that has been extended with Britains trees, Faller buildings and a number of Lone Star accessories. The de luxe train set is quite unique in that it is a complete layout on its own with over ninety pieces which will fit on to a 3 ft. square card table, but which can be extended into an even more elaborate layout at a later date. The layout includes hills, high level track, bridges, tunnels, roads, and many other items.

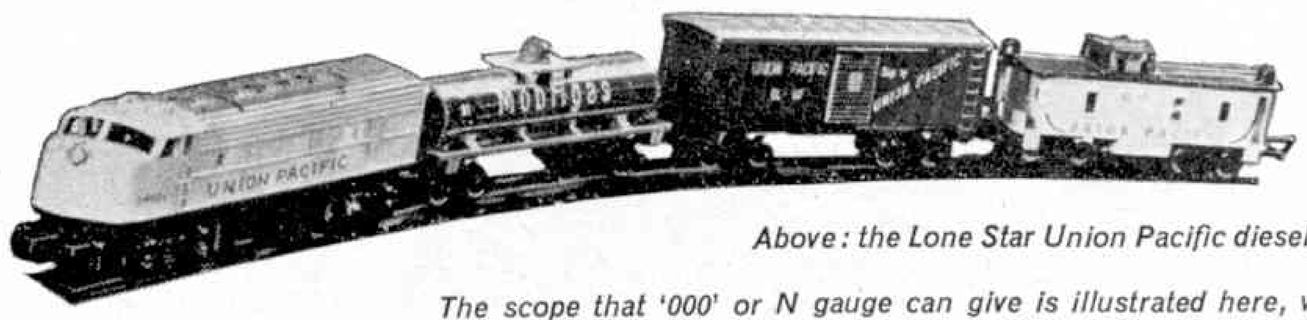
Trans-Continental sets include the F7 diesel locomotive, and items of additional rolling stock. A Baldwin 0-8-0 locomotive is available separately, as also is a very comprehensive range of rolling stock of both British and Continental prototypes.

Arnold Rapido

Arnold Rapido train sets are not available in this country, but a wide range of separate items of rolling stock are, and it therefore is possible to build a complete railway system using these items and the separately available track system. This includes two points which, when used with Peco 9 mm. flexible track, can be used to form practically any size and design of layout. To start with I would suggest buying one of the steam locomotives—or one of the electric or steeple cab locomotives if you prefer it—and a small selection of rolling stock, perhaps two goods vans, a tank wagon, low sided wagon, a bogie pipe wagon, and of course, a brake van.

Egger Bahn

Finally, there's the beautiful little Egger Bahn 'works' railway system which can be used in conjunction with an 00 or H0 railway or it can alternatively be used as a railway system in its own right. The gauge of the track is 9 mm., and the locomotives which are beautifully detailed, include seven different types in both steam and diesel. I shall be dealing with this and the Mini-Trix system in greater detail in the third part of this series which will appear in the December issue.



Above: the Lone Star Union Pacific diesel train

The scope that '000' or N gauge can give is illustrated here, where the baseboard concerned is only 5 ft. across. This effective scene shows examples of the products that are now available for this gauge

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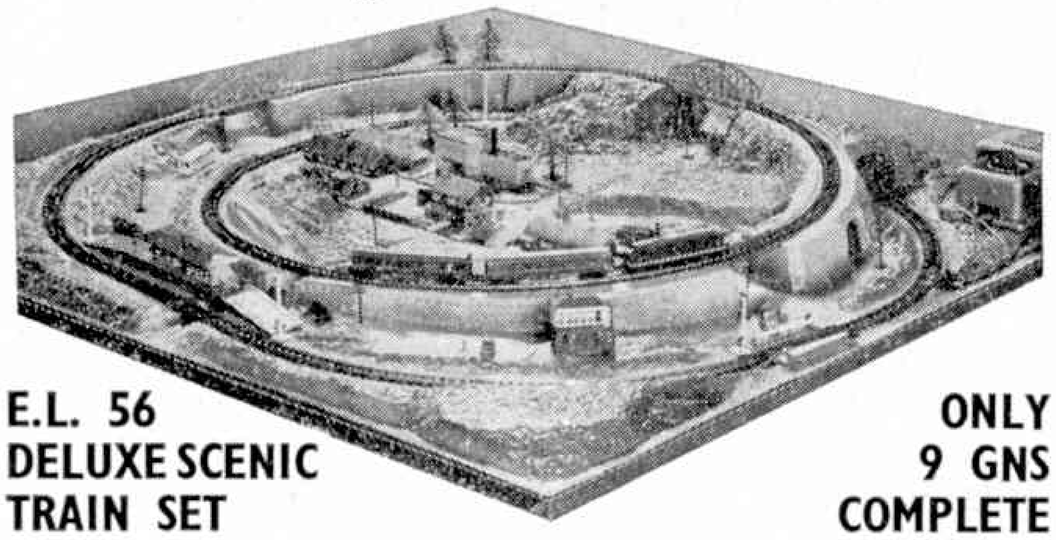

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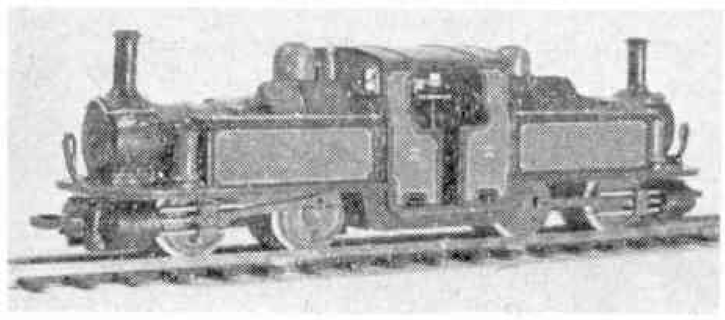

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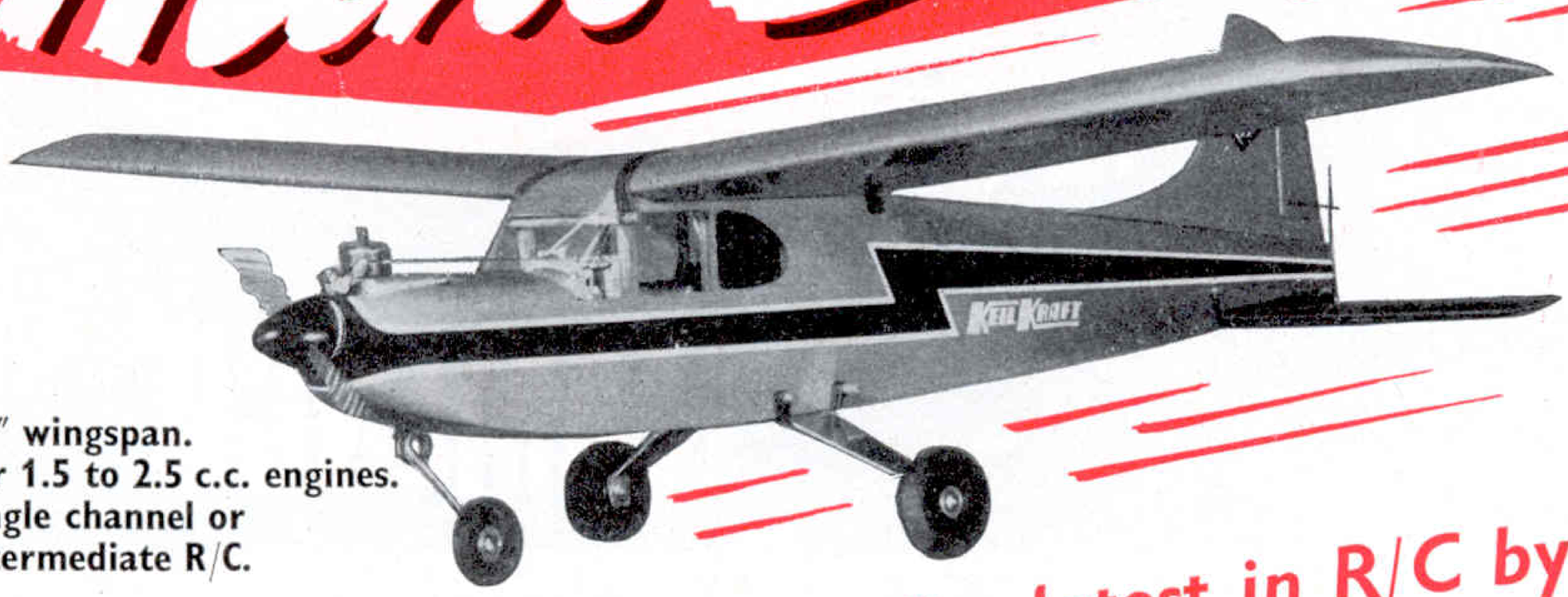

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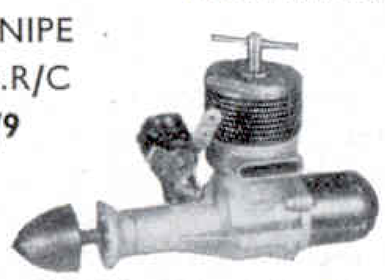

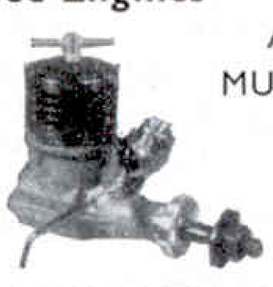

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ON its very first flight **Flamenco** so exceeded expectations that it flew out of the field selected for test-flying and led its designer 'a real old dance' climbing across ditches, through hedges and over a ploughed field to recover it. Perhaps this performance influenced the choice of name! If you build **Flamenco** you will certainly have a real flyer on your hands—and the building is fun too. The 'easi-build' sketches and plan provide full constructional details, and if you have already built one or two models you will find no difficulty in building **Flamenco**—accuracy of construction being the golden rule—as always.

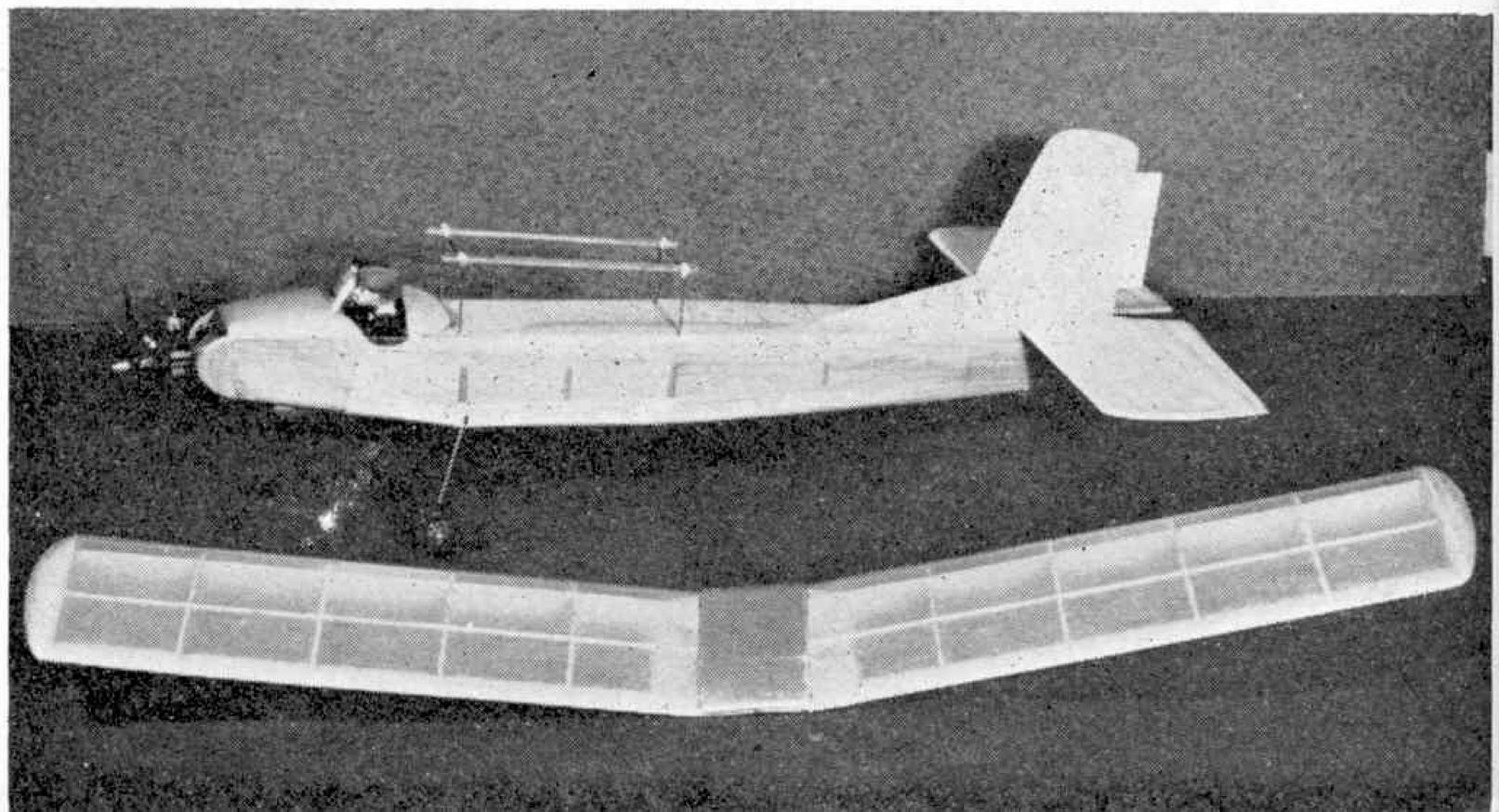
driving plate. I hope to fit **Flamenco** with radio-control at a later date, getting extra thrust to cope with the weight of the sub-miniature radio gear (2½ ounces approximately) by using the propeller the normal way round. Thus with **Flamenco** you not only have a free flight model, but also a model capable of development into a radio-controlled version. However, for free flight *do* remember to mount the propeller back to front!

Before attempting any flying, balance the model carefully at the point shown on the plan. Our original model needed a little piece of folded sheet lead in the weight-recess in the nose radiator. Test glide over long grass on a calm day. Launch steadily with a 'follow through' movement of the arm—*never* throw the model. Obtain a straight glide. Use the fin trim tab to correct any sharp turn to left or right. Avoid any tendency to turn *left* on the glide, but a slight *right* turn is permissible. Before attempting a power-on flight, make sure you have the engine pointing downwards (downthrust) at the correct angle, and when viewed from the top it should point slightly to the right (model viewed from the rear). The ⅛ in. thick ply offset block will ensure the correct angle. Finally, check for correct alignment of the wings, tailplane and fin (no warps please!)—and do not completely fill the tank. On a full tank **Flamenco** might land in the next county! Happy flying. **Stage-by-stage building sketches are on page 32.**

Flamenco dismantles for easy transport

For R/C too . . .

Flamenco is powered by the world famous Cox T.D.010 glow plug motor which is the smallest production motor in the world. Although so tiny, the T.D. 010 is a real power-house and you will need to fit the 3 in. diameter propeller (supplied, together with full operating instructions, with the motor) on *backwards*. This reduces the thrust, but still produces plenty of power to take **Flamenco** aloft very rapidly. To mount the propeller on the motor, in reverse, place it on the driving shaft with the *small* diameter hole towards the motor



Tail cone from block

All ribs 1/16 sht

F8

Slot

F7

20 swg wire

Slot

Tailplane-fin-wing mainspar-top and bottom of fuselage-3/32 sht

sheet join

Wing centre section covered with 1/16 sht

Under fin 3/32 sht

Fin fairing 3/32 sht

Bevel edges of tailplane and fin

Fuselage sides, 1/16 sht

F6

Trim tab from thin card

FINISH

Give all sheet parts two coats of clear dope.

Give wing tissue one coat of clear dope.

Decorate with colour tissue doped on

Give entire model a coat of fuelproofer

NOTE

All parts starred ★ must be enlarged to DOUBLE the size shown. All other parts are given FULL SIZE

HEAVY OUTLINE shows shape of fuselage sides

Mainspar 3/32 sht

Note wing incidence angle

F5

Slots for formers

F4

BALANCE POINT

F3

From block

Celluloid

Top view of fuselage

F2

1/4 sq

Nose weight recess

F1

Radiator from block

T.D. .010 engine

1/8 ply. block to give engine offset. (IMPORTANT)

N.B. Engine downthrust

Bamboo 1/8 x 3/16

C/L

Wire wing mounts. 18 s.w.g.

Check sizes and bind to Formers 3-5 very accurately

Formers 3-5-1 are 1/8 plywood

1/8 ply engine offset block

F5

1" dia. wheels-Hardwood or rubber

Drill small holes

Pilot and passenger can be carved from 1½ sq. balsa blocks.

Paint with poster paints

F3

Thread

F2

3/32 sht

C/L

F1

1/8 ply

F8

3/32 sht.

F.7

3/32 sht.

Gussets 3/32 sht

3/32 sht

1/4 sq

1/8 x 1/2

1/16 sq

1/16 sq

Cover wing with light-weight modelspan tissue

Wing tips from block

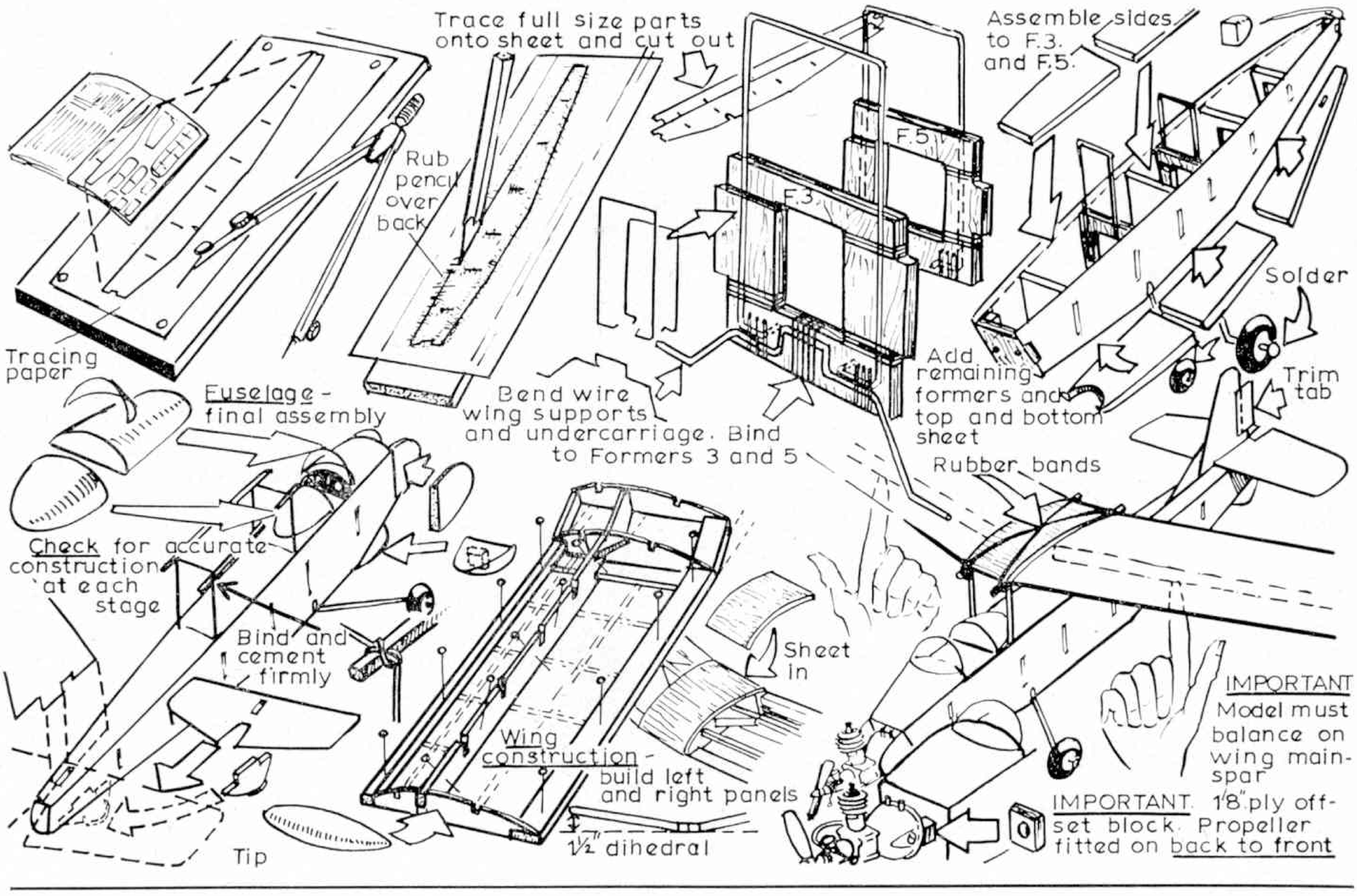
F4 C/L

3/32 sht

F6 C/L

3/32 sht

RM. 1965.


Trace full size parts onto sheet and cut out
Rub pencil over back
Tracing paper
Assemble sides to F.3. and F.5.
F.5
F.3
Solder
Add remaining formers and top and bottom sheet
Trim tab
Rubber bands
Bend wire wing supports and undercarriage. Bind to Formers 3 and 5
Fuselage - final assembly
Check for accurate construction at each stage
Bind and cement firmly
Sheet in
Wing construction - build left and right panels
1½" dihedral
Tip
IMPORTANT Model must balance on wing main-spar
IMPORTANT 1/8" ply off-set block. Propeller fitted on back to front

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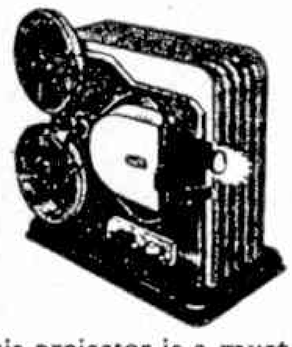

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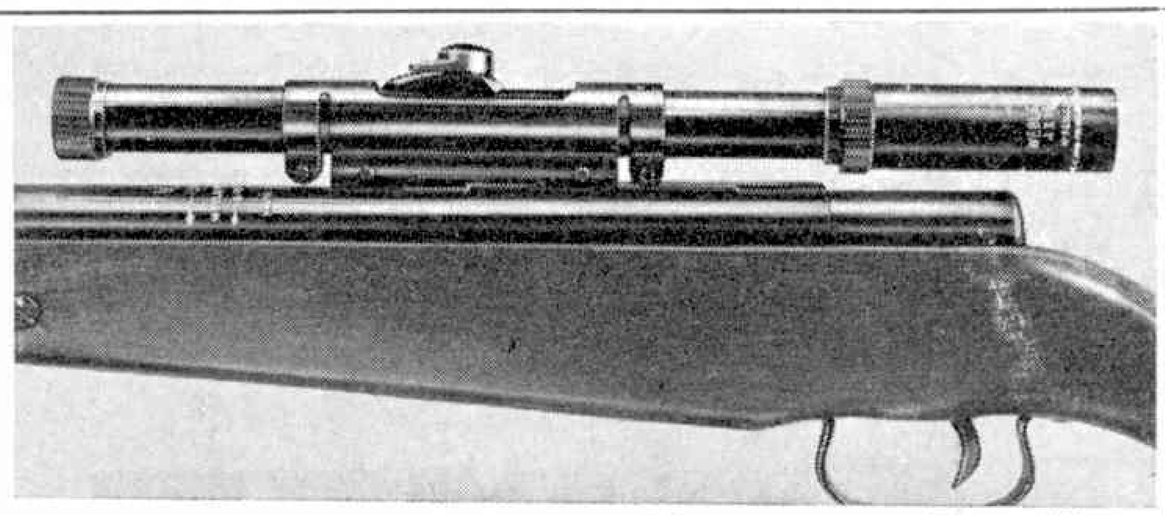

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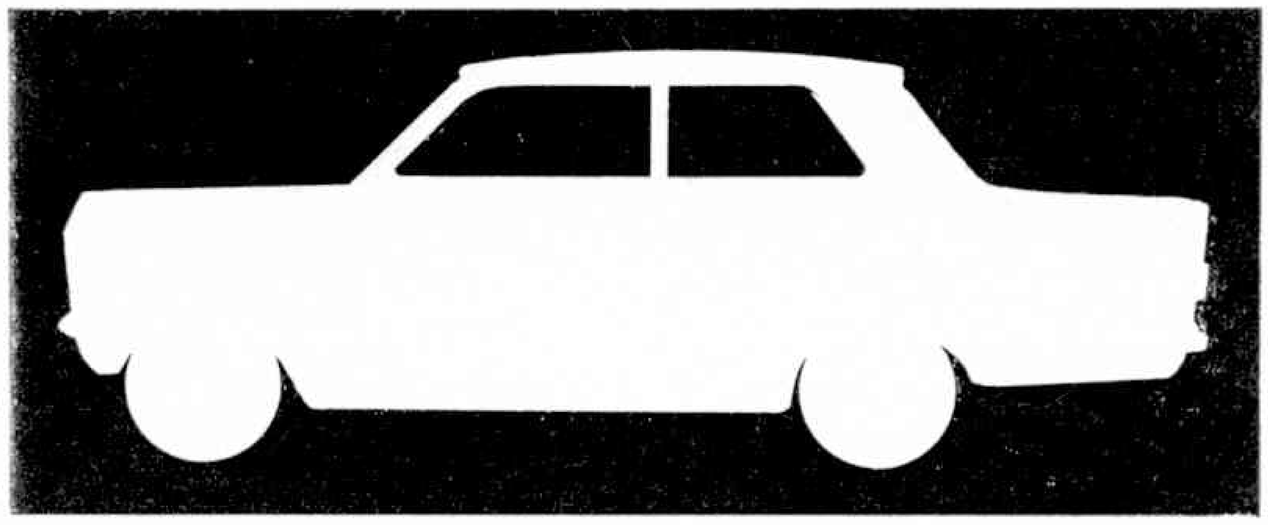

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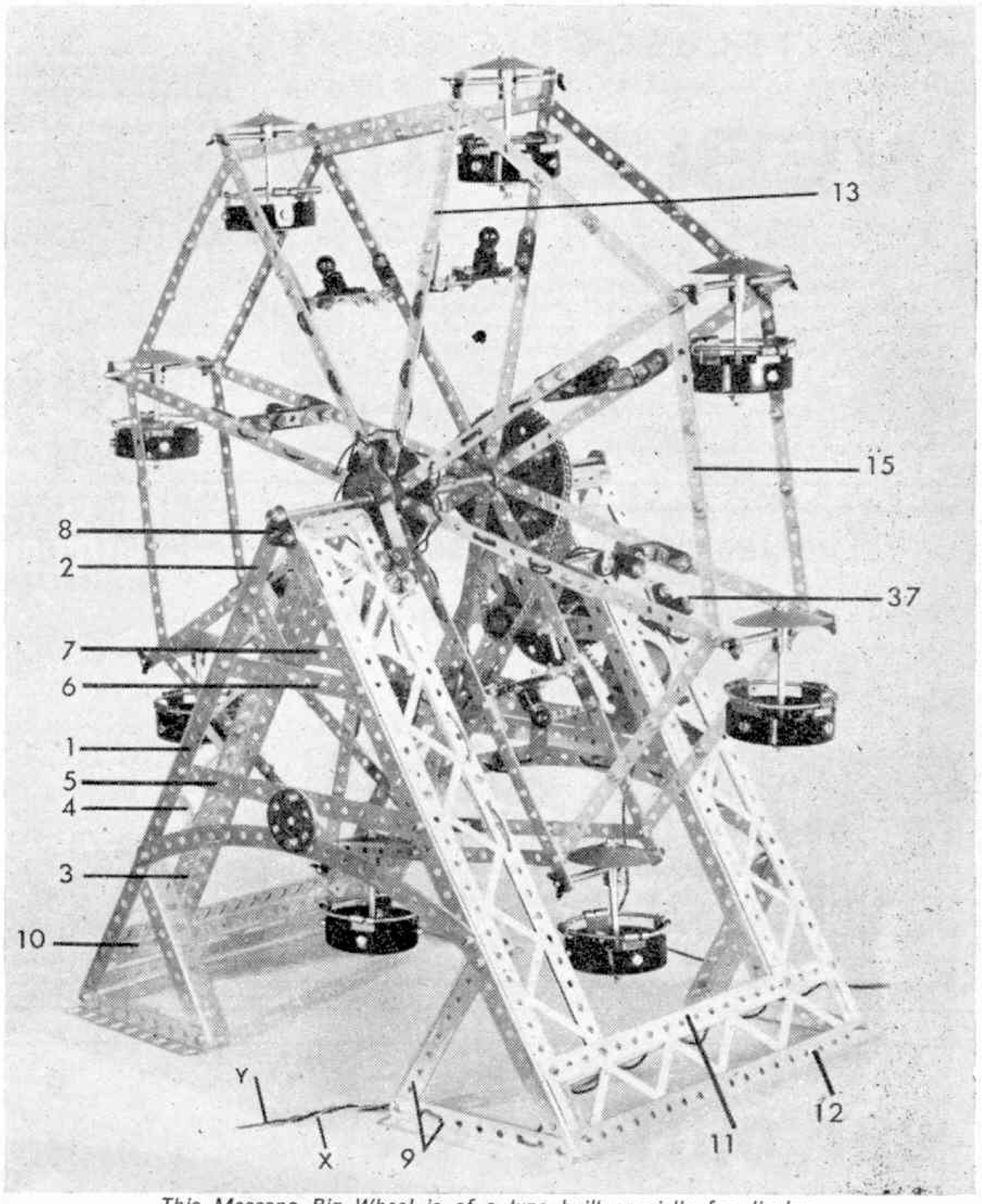


This Meccano Big Wheel is of a type built specially for display purposes by the Model-building Department of Meccano Limited

all the fun of the fair!

FAIRGROUND amusements have always proved fascinating subjects for Meccano model-builders, a fact that was recently strengthened by Mr. Bob Moy, head of our Model-building Department. This department spends a good deal of time producing special display models for dealers, who choose their requirements from an illustrated list of various standard constructions available. Of all the many different types of models on the list, by far the most requested is a particularly attractive Big Wheel. In fact, Mr. Moy tells me that to meet the demand, he must build two Big Wheels for every one of the other models. Both he and I felt that readers might like to try their hand at it themselves; therefore I give full building instructions for it below, with a few modifications.

Triangular Support

This part of the model can be built in two similar sections. A 12½ in. Angle Girder 1, extended by a 2½ in. Strip 2, is connected to another 12½ in. Angle Girder 3 by a 12½ in. Braced Girder 4, overlayed at the top by a 2 in. Strip. An Angle Bracket is used to fix the Braced Girder to Strip 2.

Another similar construction is built up and the two are joined together by two 5½ in. Curved Strips, a 7½ in. Strip 5, a 4½ in. Angle Girder 6 and a 4½ in. Strip 7. Two 2½ in. Strips are bolted between Girders 6 and 1, and another two between Strip 7 and Girders 3, to act as bracers. Further bracing is supplied by a 6-hole Wheel Disc fixed to Strip 5 and the two Curved Strips. Two 1 in. Triangular Plates 8 are bolted, one to the top of Girders 1 and the other to the top of Girders 3. These will later serve as the bearings for the Wheel, itself.

At the lower ends of Girders 1, two 4½ in. Angle Girders 9 are bolted in position as shown to form two small triangles. Each main triangular section is now joined at the two lower corners by a 9½ in. Angle Girder 10 and a 9½ in. Braced Girder 11, overlayed by a 9½ in. Strip 12.

Wheel and Chairs

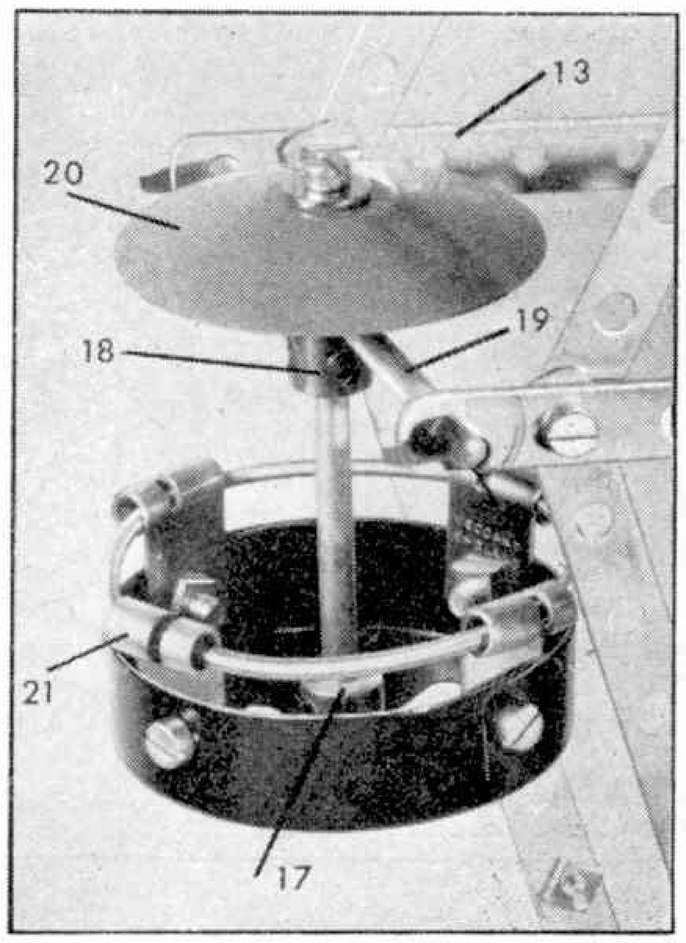
While being rather complex in appearance the Wheel is really quite easy to build. You will note, however, that it is made up mainly of narrow Strips. This need not deter you as they could be replaced by ordinary Strips, although it may not be possible to have as many arms.

Eight compound 9 in. narrow Strips. 13 are each built-up from two 5½ in. and two 4½ in. Narrow Strips, arranged in pairs. With Narrow Strips this is advisable for strength. The strips are then bolted to a Face Plate 14, care being taken to see that in each case the 5½ in. Narrow Strips lie one on either side of the Face Plate. Strips 13 are connected by eight compound 7 in. narrow strips 15, obtained from two 4½ in. Narrow Strips.

Another similar construction is built up and the two are then joined by eight compound 3 in. by 1 in. double Angle Strips. These are obtained from two 1 in. by 1 in. Angle Brackets connected by a 3 in. Narrow Strip 16.

All the chairs are similarly built from a Boiler End, to which a Rod Socket 17 is fixed. A 2 in. Rod, mounted in the

One of the eight chairs, all of which are similarly built



longitudinal bore of a Threaded Coupling 18, is secured in the Rod Socket. Mounted in the transverse bore of Coupling 18 is a 3½ in. Rod 19 while a Bolt carrying a Washer and a Conical Disc 20 is screwed into its threaded longitudinal bore. Four right-angled Rod and Strip Connectors 21 are bolted to the Boiler End, and through these is threaded a length of spring cord to serve as a safety rail. Rod 19 is journalled in the end holes of Narrow Strips 13, being held by Angle Brackets. Note that the rod must turn freely in these strips.

The completed Wheel is mounted, along with a 3 in. Sprocket Wheel 22, on a compound rod 23, made-up from a 5½ in. and a 5 in. Rod joined by a Coupling and journalled in Triangular Plates 8. Collars hold it in place. The Sprocket is fixed to the Wheel by four 1⅛ in. Bolts, but is spaced from it by a Coupling 24 on the shank of each Bolt.

Motor and Gear Arrangement

A 7½ in. Strip 25, overlayed by a 2½ in. Strip 26, is secured between one set of Angle Girders 3. Strip 25 is connected to Strip 5 by a 2 in. Strip 27 and two 1 in. by 1 in. Angle Brackets, at the same time bolting a 2½ in. Strip 28 to Strip 5. An Emebo Motor with a ¾ in. Sprocket Wheel 29 on its output shaft is also fixed to Strip 5 by Angle Brackets.

Mounted on a 2½ in. Rod, held in Girder 6 and Strip 7 by Collars, is a ½ in. Pinion 30 and a 1 in. Sprocket Wheel 31. Sprocket Wheel 31 is joined to Sprocket Wheel 29 by a length of Chain, while Pinion 30 meshes with a 2½ in. Gear 32 on a 3 in. Rod, also held in Girder 6 and Strip 7 by Collars. On the end of this Rod is fixed another ¾ in. Sprocket Wheel 33 which is connected by Chain to Sprocket Wheel 22.

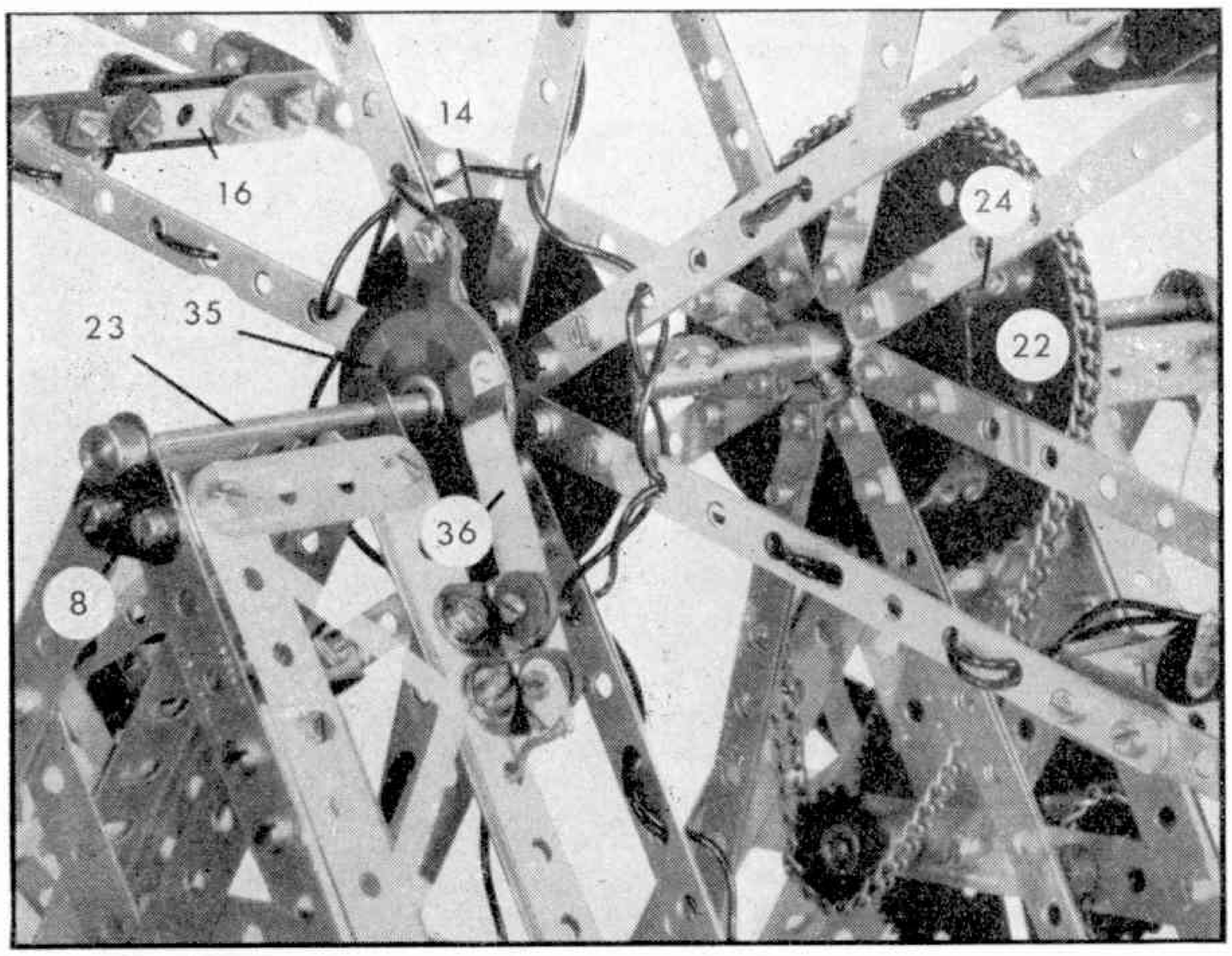
Electrical System

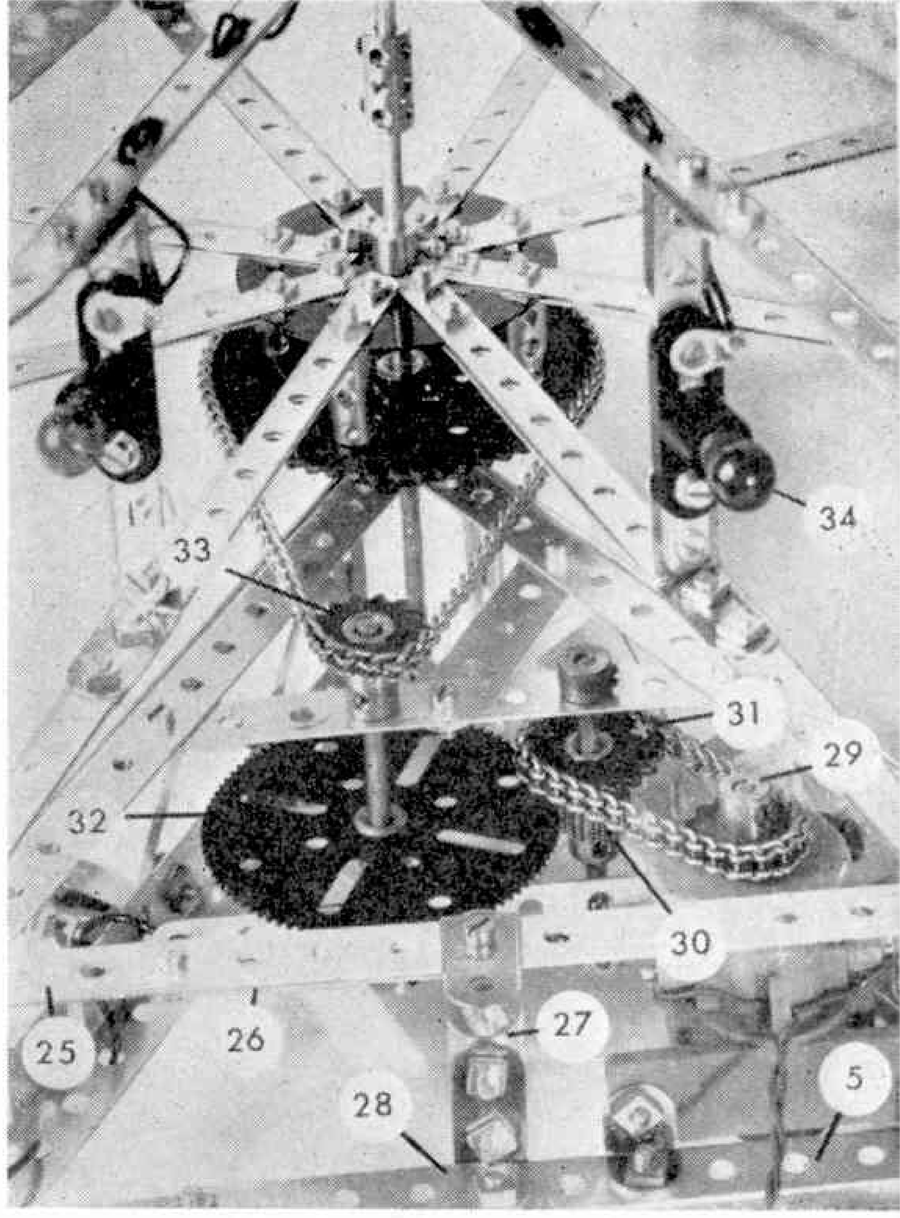
It is not, of course, essential to fit flashing lights to the model, but they do greatly add to it. An Elektrikit Lampholder with Lamp 34 is secured to each compound 3 in. by 1 in. double angle strip, one terminal being "earthed" by bolting it direct to one of the 1 in. by 1 in. Angle Brackets. The other terminal must be insulated from the rest of the model. On the special display model shown in the accompanying illustrations this was done by using a thin 6 B.A. bolt and a fibre washer to hold the Lampholder in place, care being taken to see that the bolt did not touch Narrow Strip 16 or the other 1 in. by 1 in. Angle Bracket. You, however, can avoid this by substituting a 2½ in. Insulating Strip (Elektrikit Part No. 502) for Narrow Strip 16.

The insulated terminals of four of the Lampholders are connected together by wire, which is then connected to one terminal of a flat Commutator (Elektrikit Part No. 551), fixed on compound Rod 23. The insulated terminals of the remaining four Lampholders are similarly connected to the other terminal of Commutator 35.

A 2 in. radius Wiper Arm 36 (Elektrikit Part No. 533) is fixed to, but is insulated from, two Angle Brackets bolted to one Braced Girder 4. In our model this has again been done by using 6 B.A. bolts and fibre washers. You could bolt, say, a 1½ in. Insulating Flat Girder to the Angle Brackets and attach the Wiper Arm to this. A length of wire X for the battery is connected to the Wiper Arm. The position of the Wiper Arm on the Commutator, of course, determines the number of times the lights flash on and off per revolution of the Wheel.

A close-up view showing the Commutator and Wheel mounting





The motor and gear arrangement viewed from beneath

Another four Lampholders with Lamps are bolted to the side of the triangular support carrying the Motor. One of these can be seen at 37. Another is in a corresponding position on the other side of the triangle while the remaining two are fixed to the 5½ in. Curved Strips bolted between Girders 1. Again, one terminal of each Lampholder is 'earthed' while the other is insulated. Unfortunately the only way I can see of insulating it in this case is to use a 6 B.A. bolt and a fibre washer.

As before, the insulated terminals of these four Lampholders are connected together by wire, which is then extended, as Y, to be used as a battery lead.

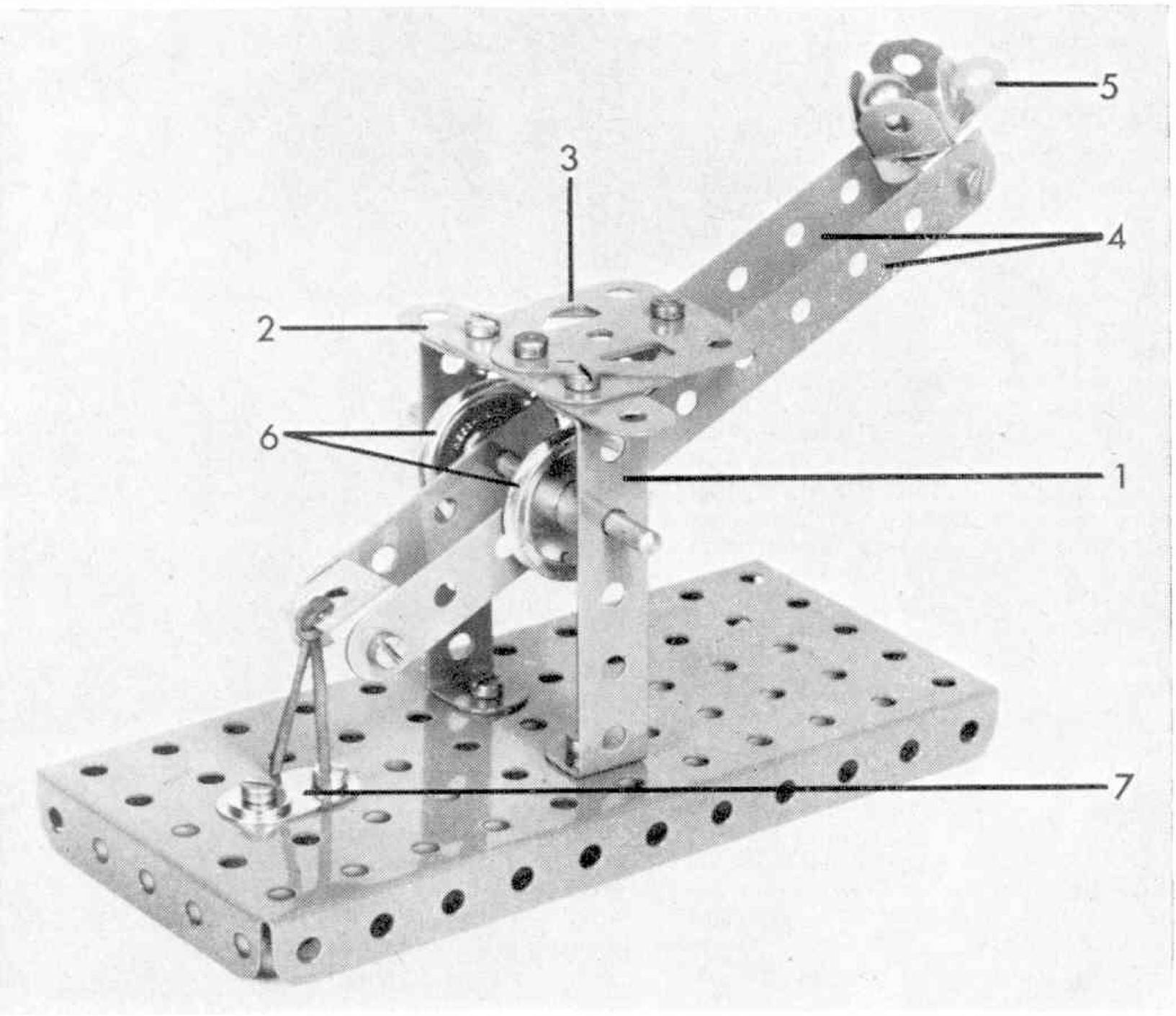
Both the Lamps and the Motor can be powered from the same battery, but I advise you to use two different sources. Leads X and Y are connected to one terminal of the battery, while a wire from its other terminal is earthed by attaching it to any of the Bolts used in the triangular support.

Parts required

2 of No. 1a	16 of No. 35	8 of No. 187a
3 of No. 1b	265 of No. 37a	32 of No. 212a
2 of No. 2a	265 of No. 37b	8 of No. 235a
2 of No. 4	32 of No. 38	64 of No. 235d
14 of No. 5	2 of No. 58	32 of No. 235f
5 of No. 6	6 of No. 59	1 of No. 533
8 of No. 8	5 of No. 63	12 of No. 539
2 of No. 8a	8 of No. 63c	3 of No. 540c
10 of No. 9a	4 of No. 77	3 of No. 540j
8 of No. 12	4 of No. 89	3 of No. 540r
18 of No. 12a	1 of No. 94	3 of No. 540v
1 of No. 14a	1 of No. 95b	1 of No. 551
1 of No. 15	2 of No. 96a	14 7/16" 6 B.A. Bolts
8 of No. 16	4 of No. 99	14 6 B.A. Nuts
1 of No. 16a	2 of No. 99a	28 Fibre Washers
1 of No. 16b	2 of No. 109	1 Emebo Electric Motor
8 of No. 17	2 of No. 111a	
2 of No. 24c	16 of No. 111c	
1 of No. 26	8 of No. 162a	
1 of No. 27c	8 of No. 179	

ancient catapult and an excavator

by Spanner



This simple model based on a giant catapult forms part of an interesting game

BEFORE the invention of gunpowder, one of the most feared weapons in use was the giant catapult. Many a stoutly-defended castle fell to the enemy once these formidable 'engines of war' were brought into the front line. With them, the attackers hurled huge rocks, scrap iron, clods of earth and even flaming fire-balls into the besieged castle, soon battering down the defences or causing so much damage to the defenders that they were forced to surrender. Our first model featured here is a simple working version of the giant catapult, but I have increased its 'play-value' by inventing a little game with which to use it.

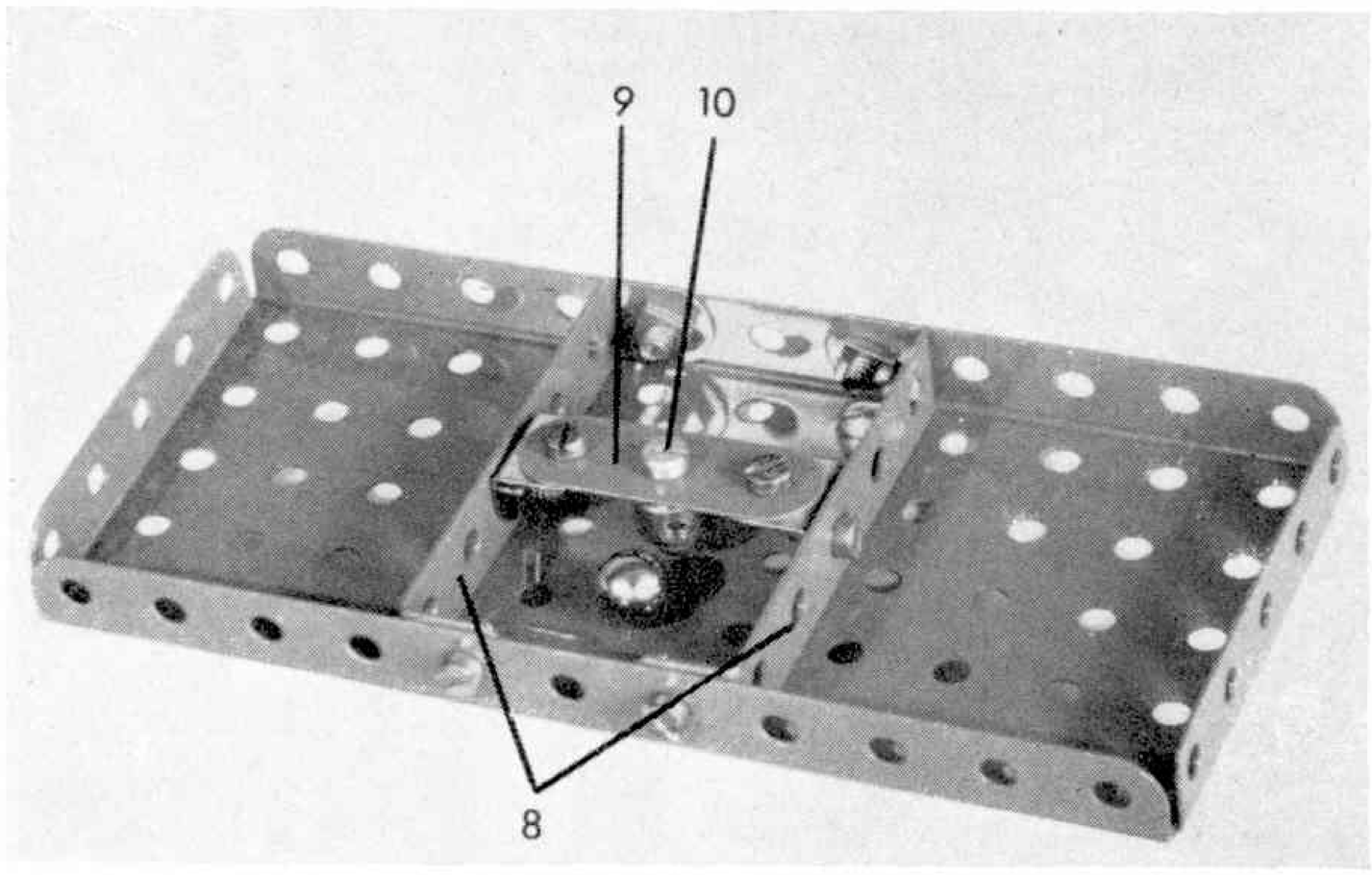
Only a few parts are used in the Catapult's construction, and they can be put together in a very short time, as follows:—

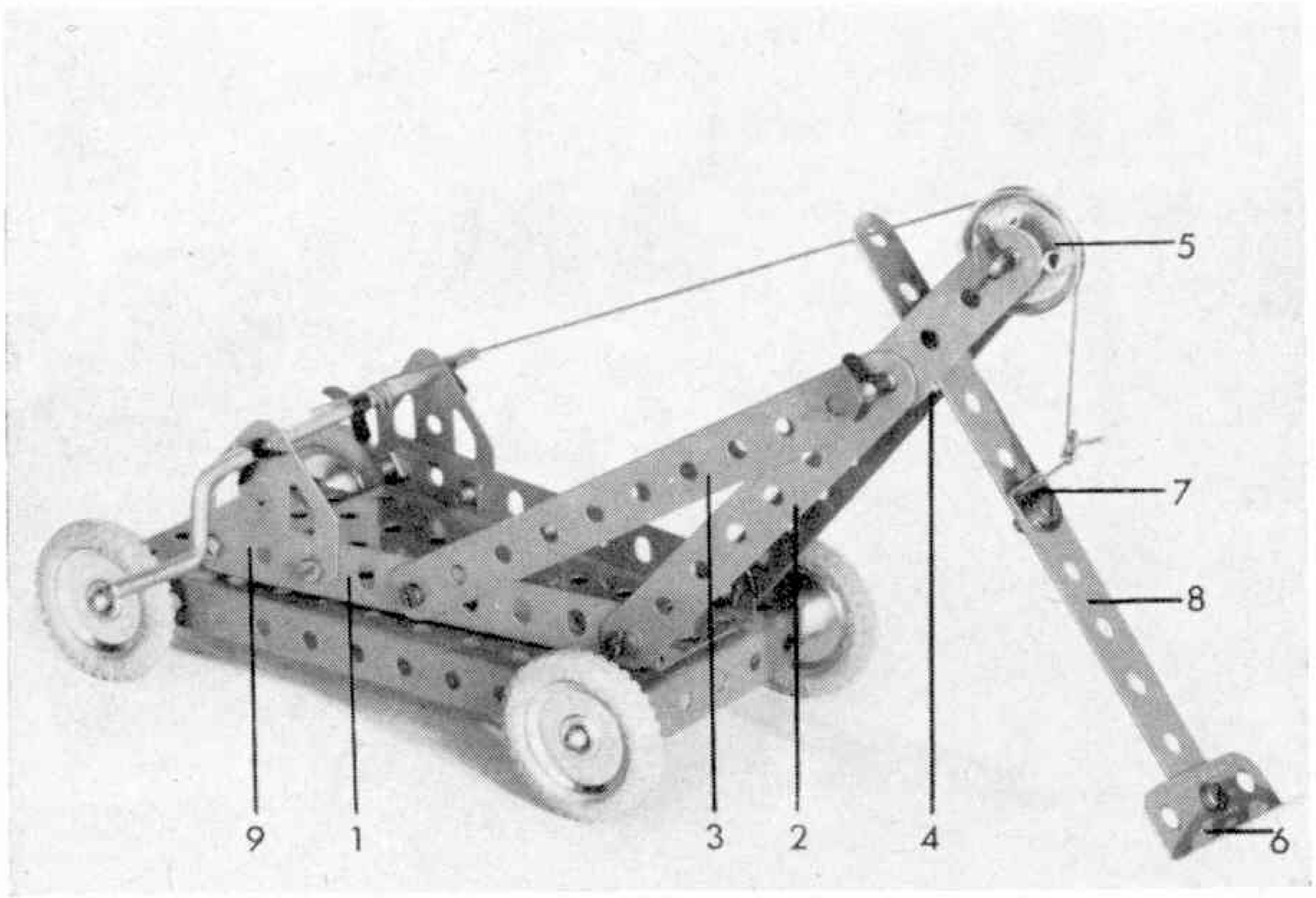
Two $2\frac{1}{2}$ in. Double Angle Strips 1, joined at the top by a $2\frac{1}{2}$ in. Strip 2 and two Flat Trunnions 3, are bolted to a $5\frac{1}{2}$ in. by $2\frac{1}{2}$ in. Flanged Plate. Two $5\frac{1}{2}$ in. Strips 4 are then connected together by a further two Double Brackets, formed into a box shape, and a fishplate 5 are bolted to one of these Double Brackets.

The completed assembly is mounted on a $2\frac{1}{2}$ in. Rod, passed through the fourth holes of Strips 4 and journalled in Double Angle Strips 1, being held in place by two 1 in. fixed pulleys 6. Finally, a $2\frac{1}{2}$ in. Driving Band is attached to the lower Double Bracket bolted to Strips 4, the other end being secured to the Flanged Plate by a third Fishplate 7.

The game mentioned earlier could be described as a modified form of tiddly-winks. The idea is to shoot a missile (I used a Ball No. 168d) into a box, for which you gain a number of points. I felt it would be more interesting with more than one box, so I partitioned a $5\frac{1}{2}$ in. by $2\frac{1}{2}$ in. Flanged Plate into four sections with two $2\frac{1}{2}$ in. Double Angle Strips 8, connected by a $1\frac{1}{2}$ in. Strip 9, attached to the Angle Brackets. This resulted in two large and two small boxes, but the Ball could pass beneath the $1\frac{1}{2}$ in. Strip. I stopped this by fixing a $\frac{3}{8}$ in. Bolt 10 in the centre of the Strip and securing a Collar on its shank. By giving each of the larger boxes 3 points,

The target. A Flanged Plate is partitioned into four boxes, each of which is given a certain number of points





Very few parts are required to build this working model of an Excavator

and the rear small box 10 points, I found I could enjoy myself for hours, trying to score as many points as possible.

Parts required

2 of No. 2	1 of No. 16a	2 of No. 52
1 of No. 5	2 of No. 22	1 of No. 111c
1 of No. 6a	21 of No. 37a	2 of No. 126a
2 of No. 10	22 of No. 37b	1 of No. 186
4 of No. 11	1 of No. 38	
2 of No. 12	4 of No. 48a	

The excavator

Our other model is an extremely easy-to-build example of an excavator. Admittedly, it is a very simple construction, but it works very well indeed. A flanged Sector Plate 1 is lock nutted, by a $\frac{3}{8}$ in. Bolt through its centre hole, to a $5\frac{1}{2}$ in by $2\frac{1}{2}$ in. Flanged Plate, a Washer on the Bolt spacing the two plates apart. Bolted to each Flange of the Sector Plate is a $5\frac{1}{2}$ in. Strip 2, braced by another $5\frac{1}{2}$ in Strip 3. Strips two at each side, are connected, along with Strips 3, by a $1\frac{1}{2}$ in. Rod, carrying a Double Bracket 4 between the Strips. Spring Clips hold the rod in place.

Held in the end holes of Strips 2 by Spring Clips is a 1 in. Rod on which a 1 in loose Pulley 5 is mounted. A trunnion 6 and an Angle Bracket 7 are bolted to a $5\frac{1}{2}$ in. Strip 8 which, in turn, is bolted to Double Bracket 4. Two flat trunnions 9 are then fixed to the Flanged Sector Plate to act as bearings for a $3\frac{1}{2}$ in. Crank Handle, secured by Spring Clips. A length of cord, attached to the Crank Handle and prevented from slipping by another Spring Clip, is threaded through the end hole in Strip 8, is passed over Pulley 5 and is tied to Angle Bracket 7.

Both the front and rear axles are represented by $3\frac{1}{2}$ in. Rods, mounted in the $5\frac{1}{2}$ in. by $2\frac{1}{2}$ in. Flanged Plate, with 1 in. fixed Pulleys and Tyres serving as road wheels.

Parts required

5 of No. 2	4 of No. 22	1 of No. 52
1 of No. 11	1 of No. 22a	1 of No. 54
1 of No. 12	7 of No. 35	1 of No. 111c
2 of No. 16	11 of No. 37a	1 of No. 126
1 of No. 18a	13 of No. 37b	2 of No. 126a
1 of No. 18b	1 of No. 38	4 of No. 142c
1 of No. 19s	1 of No. 40	

Answers to puzzles on page 17

Tricky Teasers

A. The numbers were ten, one, two seven, four and five.
B. He was looking at a portrait of his son.
C. (1) Both groups consist of the same letters, but arranged differently.
(2) Each group consists of six consecutive letters of the alphabet in reverse order.
(3) Both words consist of the same letters.
(4) Each group consists of six alternate letters in alphabetical order.
(5) Each group consists of the five vowels.

Quick Quiz

1. Lancaster.
2. Cross roads.
3. Rack and pinion.
4. Edison and Swan.
5. Over 4,000 years.
6. Switzerland (St. Bernard Hospice).

Score Over 30 Excellent.
Over 25 good.

The Flame in the Sky

(Continued from page 15)

under control again. Then back to the lame duck procedure.

London Airport talk-down had them now. 'Steady up on 220. Lose height to 3,000 feet and maintain speed at 120 knots.' Tracey followed the bare instructions as best he could. The controller cut in again. 'You are too fast,' he said, a note of urgency creeping into his voice. 'Throttle down to 110 knots or you will over-shoot.'

This time Tracey used the oath he had discarded previously and followed the controller's instructions. Immediately—just as he had anticipated—the Flight Engineer yelped with dismay. 'Fire spreading, sir,' he cried, 'the wind isn't blowing the flame away from the wing.'

Tracey ground his teeth with fury. If he flew fast enough to keep the fire under control, he would prang on landing. If he flew slowly enough to land safely, he would burst into flames. You pays your money and you takes your choice. The hell with them all! He had put bombers down during the war plenty of times. Bombers that had been shot to ribbons over the Ruhr; bombers burned half away by fire; bombers filled with dead men; bombers with no wheels or flaps. He would do it his way.

He set his jaw and opened up the throttle so that the flames died away to a certain extent. The Ground Controller was jibbering with excited frustration at the obvious disregard of his orders but Tracey ignored him.

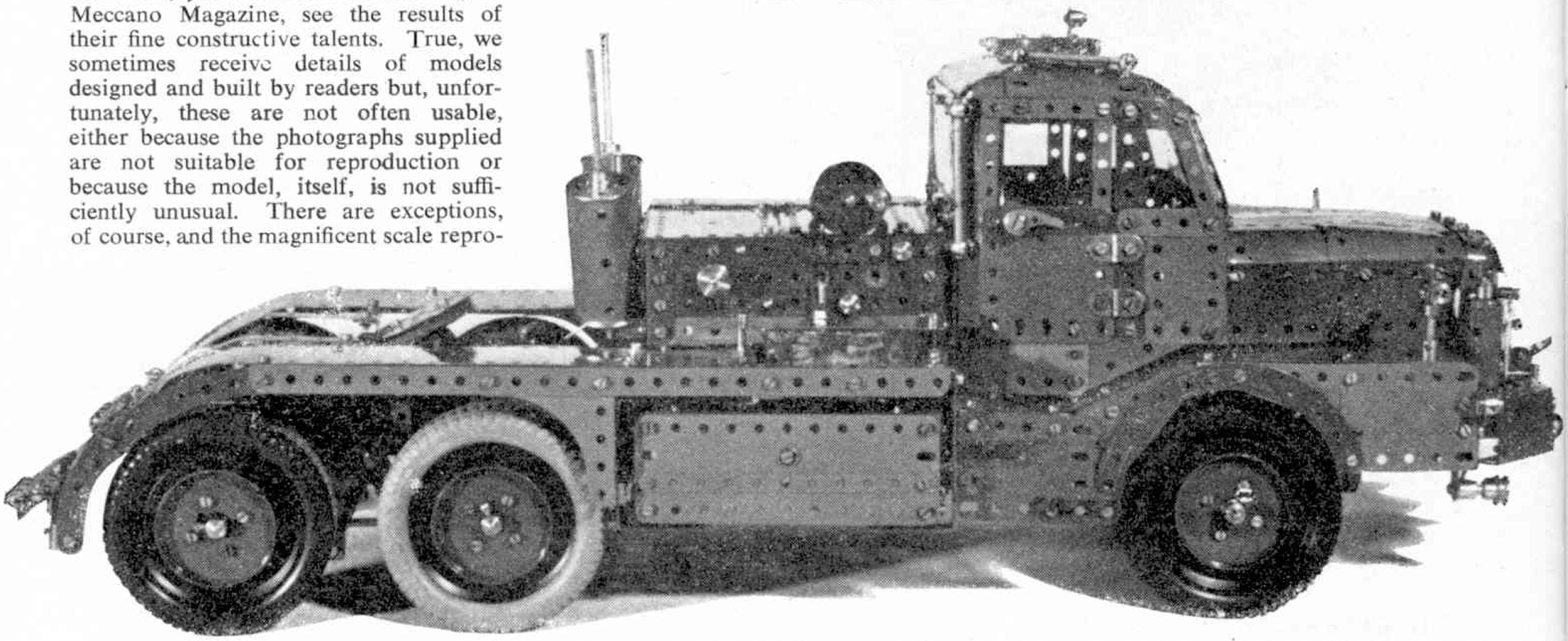
London Airport was looming up at a new and completely frightening angle and Tracey selected the longest runway —noting with grim approval the red fire-tenders scooting along the side of the tarmac. Here it was. Level up now. Wheels down. Flaps down. Throttle closing. Stick back. Down down, down . . . Bump, screech, bump, screech —there goes the Dunlop and—bang!—on with the brakes. Shut off engine. Kill all electrical circuits. Ditch the doors.

Soldiers were tumbling from the sides of the aircraft like ping-pong balls, much to the fury of the fire tender drivers who had to avoid them while trying to keep pace with the Argosy and pump foam over her port wing at the same time. But it was soon over. Tracey stopped the 'plane completely and he, with his three crew-men, slid out of the emergency exit faster than they had moved for many a long day.

The four men stood quietly looking at the fearful mess of the fire-blackened wing covered with foam. 'Nice landing, Martin' said Digger Ames and offered a packet of cigarettes round.

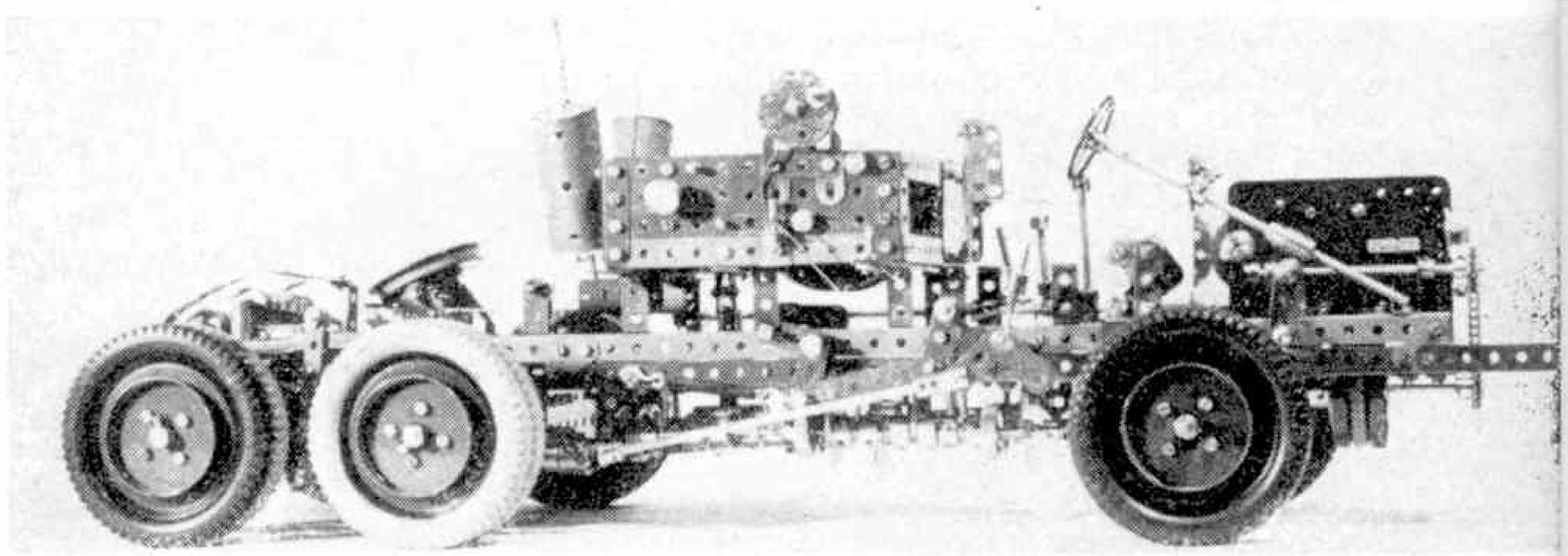
Tracey felt a hand on his arm as he took one and turned to see the Fire Chief beside him. 'Sorry, sir,' he said, 'no smoking on the tarmac. There's the fire risk, you see.'

MIGHTY MECCANO ANTAR

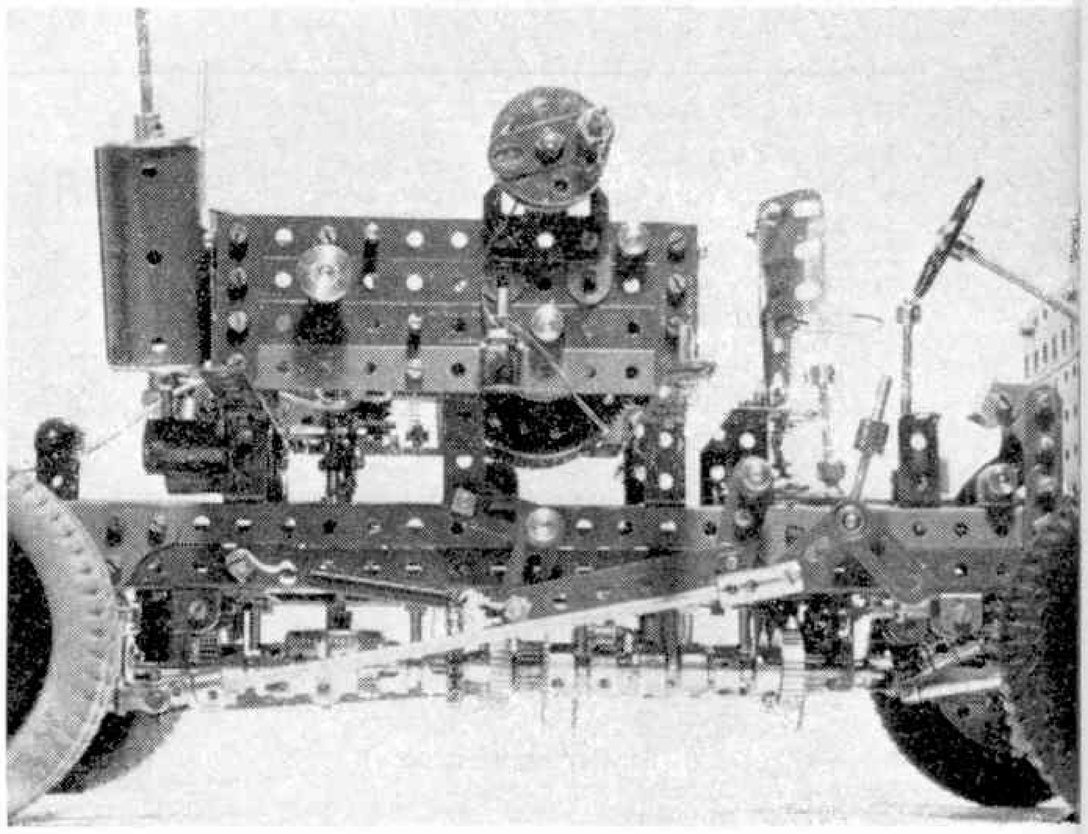


MECCANO model-builders of distinction can be found everywhere in the world, yet it is not often that we, on Meccano Magazine, see the results of their fine constructive talents. True, we sometimes receive details of models designed and built by readers but, unfortunately, these are not often usable, either because the photographs supplied are not suitable for reproduction or because the model, itself, is not sufficiently unusual. There are exceptions, of course, and the magnificent scale reproduction of a Thorneycroft Mighty Antar Tractor, featured here, is an excellent example.

This splendid model was designed and built by Rev. W. H. Erby of Heston, Middlesex, from plans and information kindly supplied by the makers of the full-sized vehicle. The scale followed was one inch to a foot because, as Rev. Erby, himself, said, 'This scale was really set by the size of the wheels, which are almost the correct size'. He further added that it was, '. . . a very convenient scale to use in Meccano models as so many of the parts seem suited to it'. Constructors would do well to accept this as a useful hint when designing models of their own.



Above: the completed chassis with the cab and bodywork removed

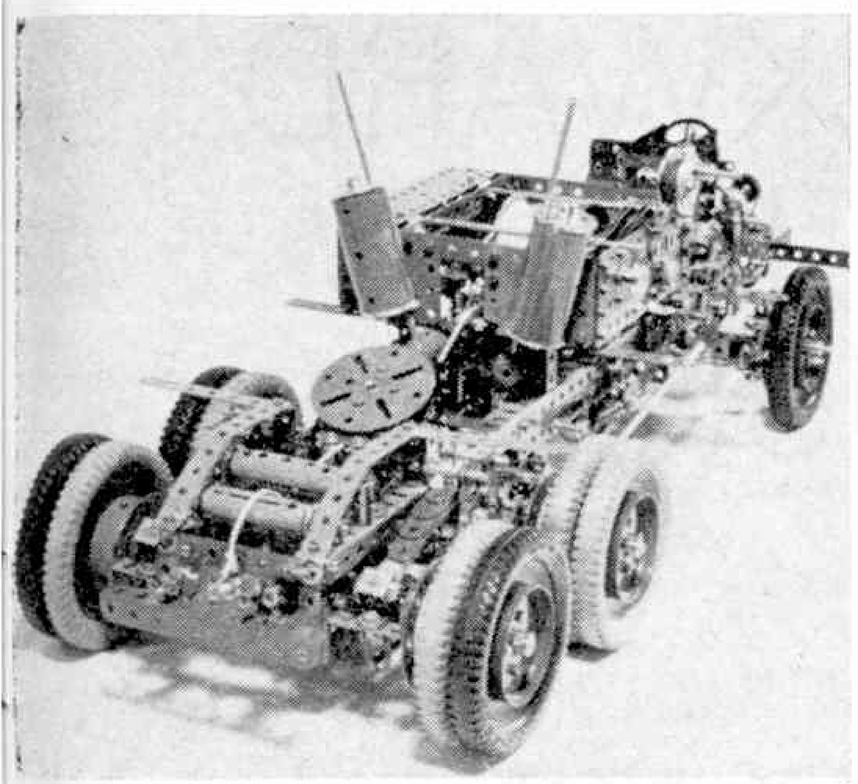


A close-up view showing the powered winch and capstan arrangements

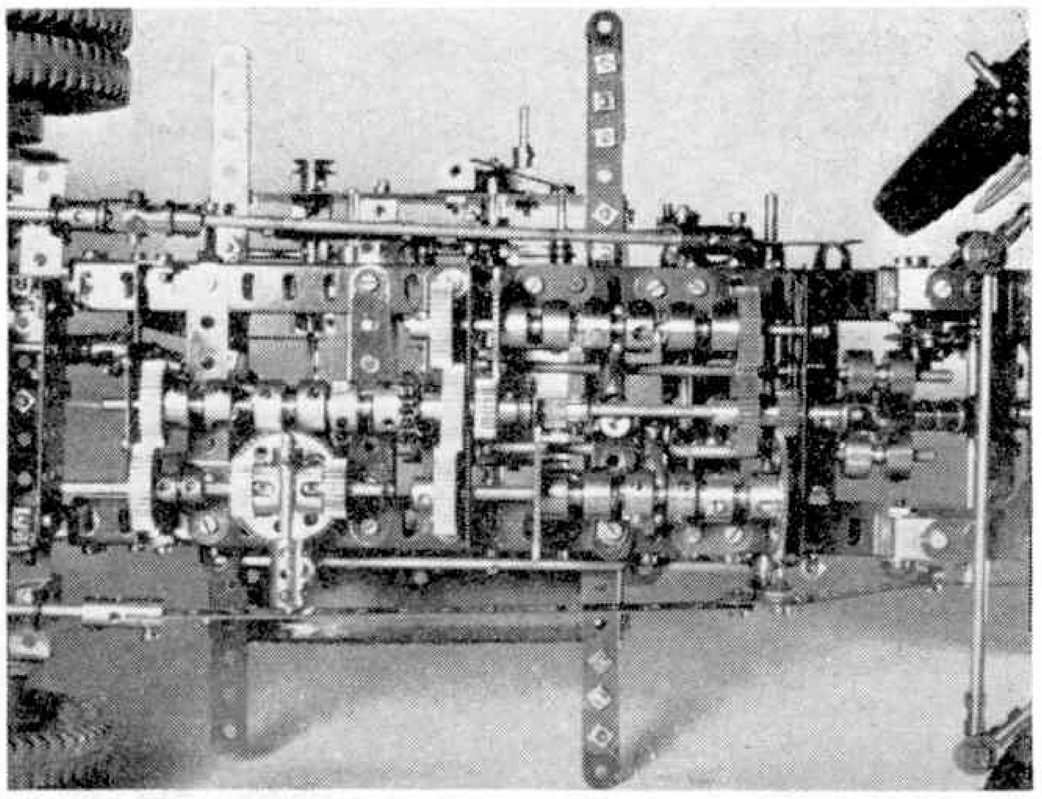
A General Description

At this juncture, to prevent readers spending time and money on writing letters for further information, we must explain that full step-by-step building instructions are *not* available. All details in existence are mentioned here, therefore, we would not be able to help anybody wanting more precise information. We feel quite strongly, however, that this should not prevent us from featuring a superb model, and we hope you will agree with us.

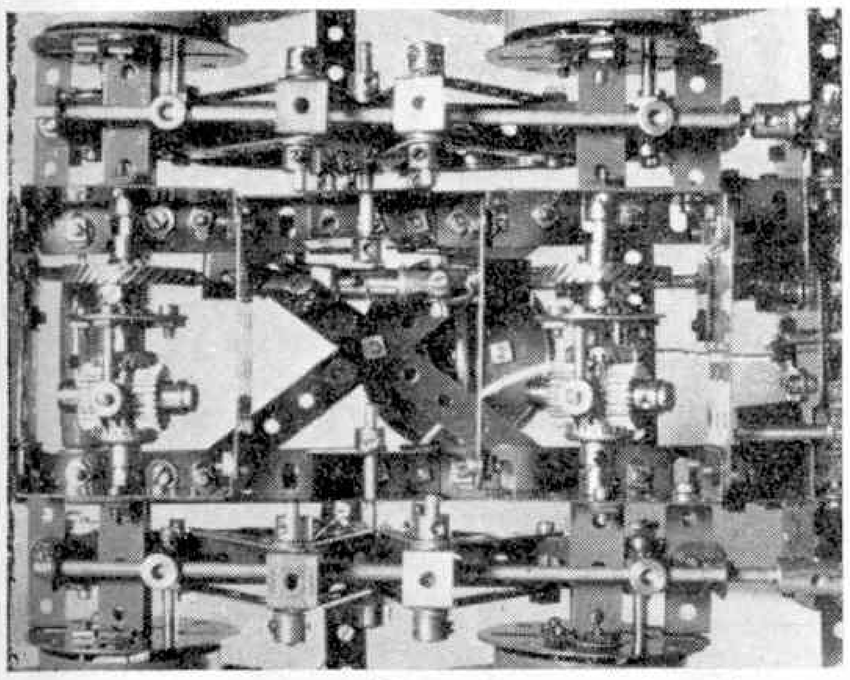
Power for the Tractor is provided by an E15R Electric Motor, connected by



The completed chassis viewed from the rear



A close-up view of the main and auxiliary gear boxes



The twin rear axles showing both differentials

Sprocket Chain to a pedal-operated twin-plate clutch, built up from two Wheel Flanges, with a 2 in. Pulley and Tyre between them. The drive is then transferred to the main gear box via an intermediate propeller shaft incorporating two Universal Couplings.

The Gear Box

The gear box provides four ratios, all the Pinions and Gears being attached to Socket Couplings, and kept from moving to and fro along their axles by Threaded Pins engaged in the centre channels of the Socket Couplings. The other socket of each Coupling carries one section of a Dog Clutch which engages in its corresponding section carried in another Socket Coupling mounted between the gears. This last Coupling slides backwards or forwards, with the layshaft Rod, engaging one or other of the gears and is actuated by the gear lever in the cab.

Also fitted to the model is an auxiliary gear box that allows the output from the main gear box to be transferred either to the rear wheels or to the power take off and, if to the latter, to provide forward or reverse motion. As in the main box, Socket Couplings in connection with Dog Clutches are used. It is interesting to note that all the above three motions are determined by only one lever.

Each of the two rear axles includes a normal Meccano-type differential driven by an overhead $\frac{1}{2}$ in. Helical Gear engaging with a $1\frac{1}{2}$ in. Helical Gear on the axle. The latter Gear, not having any holes drilled in it, as does, for example, the 57 tooth Gear, is connected to the epicyclic motion through a Wheel Disc by means of Spring Clips held on Bolts screwed (not right home) into its boss. Multi-leaf springs, obtained from Perforated Strips, are pivotally connected to the chassis members to provide a useful suspension system.

As on the real-life vehicle the front axle consists of a rectangular-section beam on semi-elliptic springs. Worm and Pinion steering of a type used on many Meccano models is provided. Brakes are not fitted to the front wheels, but each of the rear wheels is equipped with a working expanding brake using Rod and Strip Connectors on Threaded Pins.

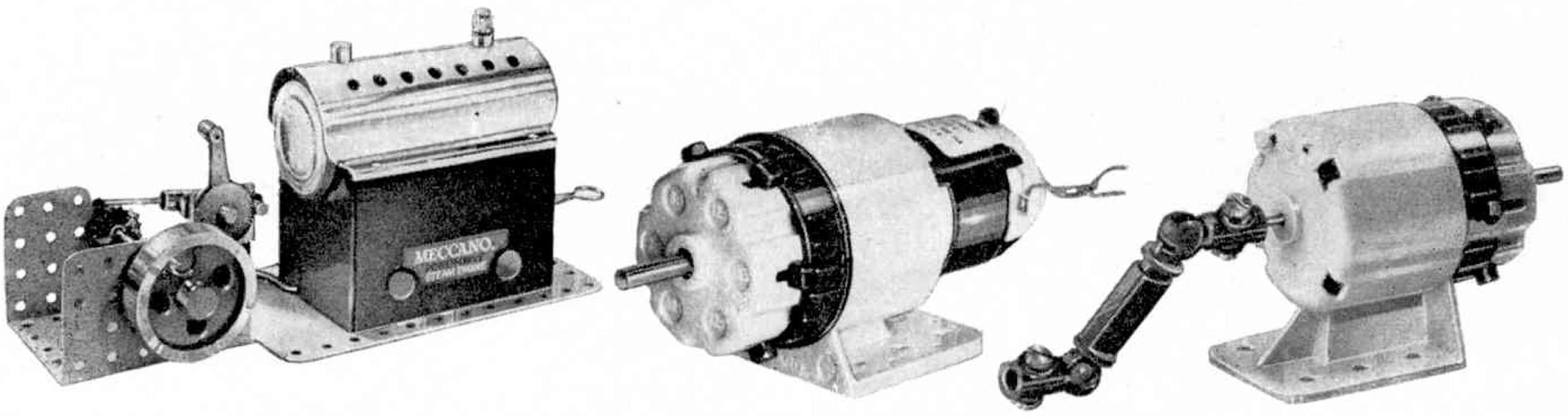
Mounted on the back of the model is a working winch with both drum and cable being to scale. Also provided is a capstan with its drum of rope, as on the prototype vehicle. The lever selecting either winch or capstan drive is operated on the spot, not from the cab, but the double-disc winch brake has cab control. The Power Take Off from the auxiliary gearbox is, incidentally, taken through a single Universal Coupling.

Besides the intermediate propeller shaft mentioned above, there is a main propeller shaft between the auxiliary gear box and foremost rear axle, and an intermediate shaft between the two rear axles. Both these shafts incorporate two Universal Couplings.

The bulk and power of the Thorneycroft Mighty Antar are well brought out in this photograph

FORWARD OR BACKWARD, UP AND DOWN, LIFT, SPIN, PULL, PUSH

make your **MECCANO** models <u>move</u> with these New Power Units



MECCANO STEAM ENGINE

What a fabulous idea for Meccano engineers to catch on to—super-efficient *steam power* to drive off gears, chains and pulleys! Working on methylated spirits and water, the Meccano Steam Engine has a single lever that operates the fly-wheel in forward *and* reverse directions, and also controls the running speed. Clean, safe, simple to operate.

ONLY 68/6

MECCANO 6-RATIO GEARBOX WITH ELECTRIC MOTOR

Now put 6-speed *electric* power into your Meccano models! Really powerful, sturdy and light, the motor works by 6-volt battery or 3-12 volt DC power supply. Speed range 115 r.p.m. to 2300 r.p.m. off-load at 6 volts. Forward/off/reverse switch. *The direct drive* gearbox transmission ratios are 3:1, 6:1, 12:1, 16:1, 32:1, 60:1. Gears may be changed while motor is running. Foolproof. Simple to operate. No maintenance required.

ONLY 49/6

MECCANO 6-RATIO GEARBOX WITH UNIVERSAL COUPLING

It's that terrific 6-speed gearbox again—this time with superbly designed universal coupling that enables you to drive it from any power source, using a standard Meccano $\frac{5}{32}$" diameter spindle. Ideal power units —Meccano EMEBO and E15R Electric Motors.

ONLY 29/11

at your toy shop now—in smart 'see-through' packs!

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COMPLETE WITH FULL INSTRUCTIONS FOR USE

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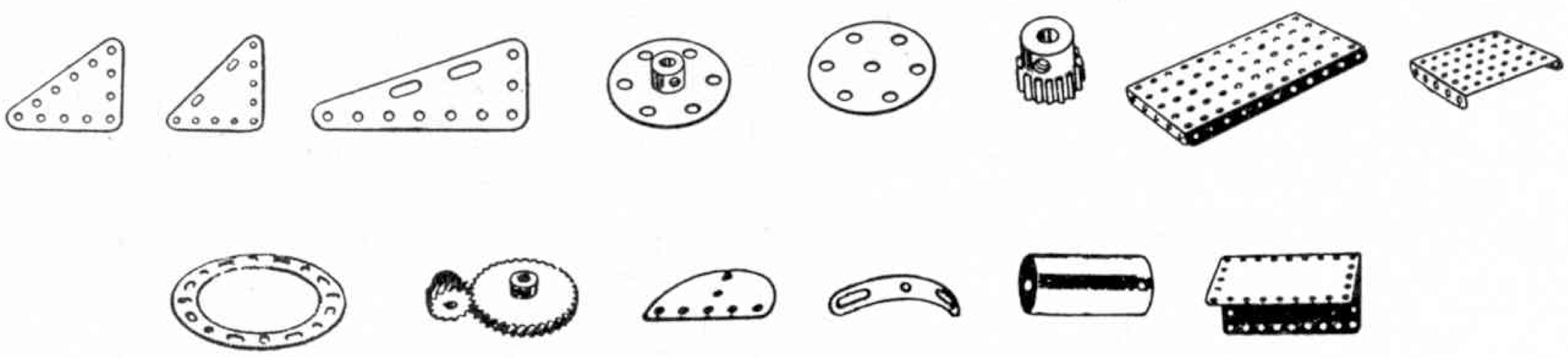
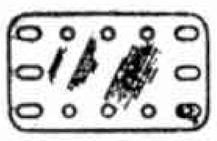
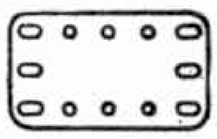


Dealers who specialise in Meccano spare parts

Listed below are some of the dealers who sell Meccano accessories and spare parts. This is intended to aid enthusiasts—and there are many of them—who constantly require additional spare parts for their Sets. All dealers can, of course, order Meccano spare parts for their customers, but those listed here are among our spare part specialists.

C. G. MARSHALL
Maxwell Road
BEACONSFIELD
Telephone: 1092





WILTONS SPORTS AND GAMES
Corner Canal and Queen Street
SALISBURY
Telephone: 2984

TETT'S THE IRONMONGERS
402 Wimborne Road
Winton, BOURNEMOUTH
Telephone: Winton 309

H. SALANSON & CO. LTD.
83-85 Fairfax Street
BRISTOL 1
Telephone: 2-6185

BARRETT'S LTD.
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CANTERBURY
Telephone: 6161

GORDON EASTON & CO.
40 Lowther Street
CARLISLE
Telephone: 22947

R. M. HILL & SONS
36/40 Castle Street
CARLISLE
Telephone 21621 and 21122

W. PAINE & CO. LTD.
168 High Street
CHATHAM, Also at Strood and Grays
Telephone: 45215

DOLL'S HOSPITAL (YOUNGSTERS)
55 Hallgate
DONCASTER
Telephone: 2831

THE GUILDFORD
DOLL'S HOSPITAL LTD.
13 Swan Lane, GUILDFORD
Telephone: 61331

LUCAS'S (Hobbies) LTD.
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LIVERPOOL 1
Telephone: Royal 7562

H. A. BLUNT & SONS LTD.
38 Fretherne Road,
Welwyn Garden City, Herts.
Telephone: Welwyn Garden 26884

JEREMY
16 Princes Arcade, Piccadilly
LONDON, S.W.1
Telephone: Regent 1846

F. T. B. LAWSON LTD.
New George Street
City Centre, PLYMOUTH
Telephone: 65363

LANE'S TOY SHOP
75 High Street
ROCHESTER
Telephone: Chatham 41870

JOHN W. BAGNALL LTD.
18 Salter Street
STAFFORD
Telephone: 3420

LESLIE BROWN
Super Toy and Model Store
95 High Street, Stockton-on-Tees
Telephone: 67616

OVERSEAS DEALERS

AUSTRALIA

Jack Stanbridge's Hobby Shop
54a Canning Highway
Victoria Park, PERTH, W. Aust.
Telephone: 61-1668

NORTH SHORE HOBBY CENTRE
(Mail Order, Parts and Sets)
8 Post Office Street
Pymble (SYDNEY) N.S.W.

Walther & Stevenson Pty. Ltd.
395 George Street
SYDNEY
Telephone: 29 3566

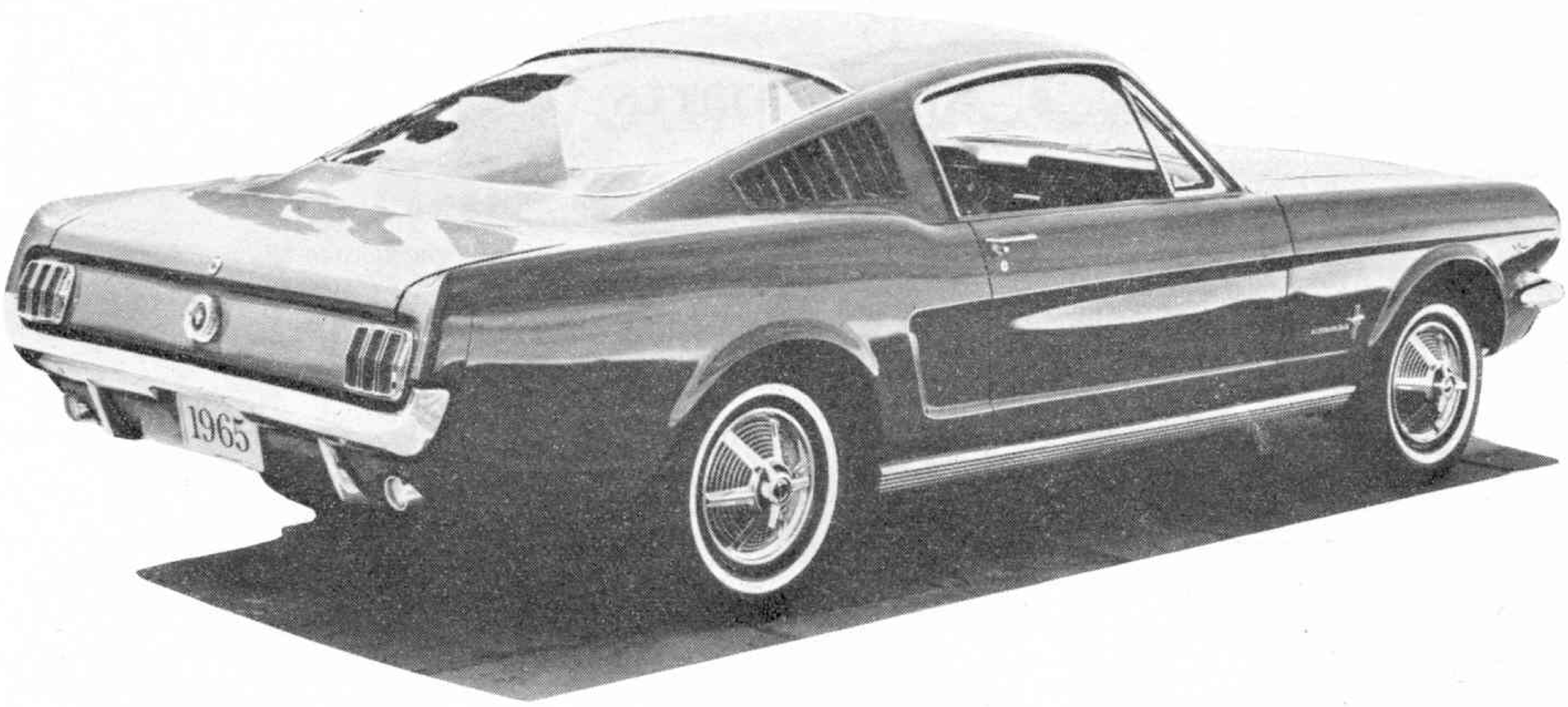
NEW ZEALAND

BUNKERS LTD.
P.O. Box 58
HASTINGS
Telephone: 84-283 (Mail orders welcomed)

Dinky Hat Trick

Three widely different models provide something for everyone

FORD MUSTANG FASTBACK



TRACTORS seem a long way removed from high-powered sports cars, yet the latest addition to the Dinky Toy range of farm machinery is closely related to the Aston Martin DB5 model which was introduced recently. Why?—Simply because both vehicles are manufactured by the David Brown organisation. You may question this statement considering that, in the June M.M., I listed Aston Martin Lagonda Ltd. as producers of the DB5. The answer is that this company is part of the David Brown group—hence the initials 'DB'!

Marketed under Sales No. 305, the miniature David Brown Tractor really is an excellent job. Not only is it an almost perfect reproduction of the real-life machine, but it also incorporates a feature never before seen on a comparable die-cast model, and one which gives it first place in its field. Before going into detail, however, I should like to follow my usual custom of describing the actual vehicle, which in this case is the David Brown 990 Diesel Tractor.

Manufactured by David Brown Tractors Ltd., of Huddersfield, Yorkshire, the 990 is powered by a 4-cylinder direct injection diesel engine of 185.8 cubic inches capacity that develops a maximum engine power output of 55 b.h.p. as defined by the Society of Automotive Engineers. This is an American society, but, as the tractor is intended primarily for the American market, the technical specifications I possess are those prepared for circulation in the U.S.A. Power to the rear wheels is via a twin range gear box giving six forward and two reverse speeds.

Unique Features

Standard features of particular interest to farmers include differential lock, all-purpose hydraulics, heavy adjustable tow-bar and independent wheel brakes. For the benefit of non-farming readers I should explain some of the terms. The differential lock gives a positive drive to both rear wheels, thus preventing one-wheel slip and enabling the tractor to drive in a straight line. With all-purpose hydraulics, on this tractor, you need only one control lever to select any of four hydraulic systems: draft control, traction control, height control, or remote cylinder control. There is no need to explain the tow-bar, but independent wheel brakes allow the wheels to be braked separately, allowing quick short turns—rather like a tank!

One very important standard feature fitted to the 990 is Power Take Off (PTO) This means that, if the tractor is towing a farm implement that requires separate power to perform some sort of operation, then the tractor can supply this power through special linkages.

Turning to the Dinky Toys model, this sports so many fascinating points of interest that I hardly know where to start. Perhaps the most important, however, is the unique feature I mentioned earlier, which is the steering system. This is 'working' in the sense that the position of the front wheels is controlled by the driver's steering wheel in the cab. The cab itself is fitted with windows and is removable to allow easy access to the steering wheel. The front axle, incidentally, not only swivels for steering, but also tilts for travel over rough country.

Also fitted is a 'clicker unit' similar to that used in the Aveling-Barford Diesel Roller, which simulates the sound of an engine when the model is pushed along. The engine casting itself can be clearly seen and is a very well-detailed representation of the full-sized vehicle's power unit. At the back of the model a large, fixed towing hook is provided plus a representation of the actual tractor's combined hydraulic lift and three point hitch apparatus. This equipment, designed

BEECHCRAFT BONANZA

(Described last month)

to lift a plough or similar implement clear of the ground when not in use, is operated hydraulically in real-life, but on the model, by a lever in the cab. The chassis is finished in black, the body in red and the wheels and cab in yellow, all combining to result in an eye-catching colour scheme.

American Sports Car

Released with the David Brown Tractor is Dinky Toy No. 161, based on America's Ford Mustang Fastback 2+2. The Mustang comes in two other versions, a convertible and a hardtop, besides the fastback, this last being the American equivalent of the Grand Touring versions of British Sports Cars.

A favourite habit of American manufacturers is to offer a choice of engines and Ford are no exception. Four different power plants are available, although the standard unit is a six cylinder engine of 200 cu. in. capacity, developing a power output of 120-hp. Other standard features include individually adjustable deep-foam bucket seats, leather-soft all -vinyl interior, wall-to-wall carpeting, courtesy lights and glove compartment light.

All major aspects of the real-life Mustang are faithfully reproduced in the Dinky model—right down to the wheel centres which are authentically plated! Standard fittings include opening bonnet, covering a plated engine, opening boot, Prestomatic steering, and 4-wheel suspension, plus windows and full interior fittings, including seats, steering wheel and dashboard. Additional features, becoming more and more common on Dinky Toys these days, are opening doors, tipping seat backs, jewelled headlamps, plated bumpers and American-style number plates. Finish is in an all-over ivory gloss with red interior.

Unfortunately, photographs of the model Mustang were not available at the time of writing. However, I will include one in the first possible future issue.

Chris Jelley

DAVID BROWN TRACTOR

Dinky Toy Winners

BELOW is a list of fifty names of readers whose entries for last month's 'Silhouette' competition were the first correct answers to be selected by the Editor. If your name appears in this list, then write on a postcard to: *Silhouette Prize, Meccano Magazine, Thomas Skinner & Co. Ltd., St. Alphage House, Fore Street, London, E.C.2.* and claim your FREE Dinky Model Triumph 2000. If your name does not appear in this list, even though you entered for the competition, don't be too disappointed—try again!

David Bragg, Redlands Gardens, West Molesey, Surrey. *Brian Bromley,* Green Meadow Road, Selly Oak, Birmingham 29. *Alan Collier,* Paget Street, Grangetown, Cardiff. *David Courtley,* Garth Crescent, Alvaston, Derby. *Nicholas Daber,* Barry Rise, Bowdon, Cheshire. *Steven Davenport,* Chase Cross Road, Romford, Essex. *Ian Dickworth,* Gisburn, Nr. Clitheroe, Lancs. *Paul Dorey,* Grosvenor Gardens, Southgate, London, N.14. *Edward Dowling,* Wick Stree Cottages, Berwick, Nr. Polegate, Sussex. *Ian Eccleshall,* Church Hill Street, Winshill, Burton-upon-Trent, Staffs. *Malcolm Elliott,* Harland Ave., Sidcup, Kent. *Stephen Foster,* Crowthorne Gardens, Rise Park Estate, Bulwell, Nottingham. *Malcolm Gilloch,* Normanshire Drive, S. Chingford, London E.4. *Clive Ginnett,* Quarterlands, Lisburn, Co. Antrim, N. Ireland. *Jeremy Gould,* Ringway, Southall, Middx. *Andrew Hilton,* Upper Hallford, Shepperton, Surrey. *S. E. Holiday,* Parkside Street, Rosyth, Fife, Scotland. *Janet Howitt,* High Road, Benfleet Essex. *Martin Hughes,* Church Road, Saxiley, Lincoln. *Kevin Isaacs,* Holloway Close, East Bridgford, Nottingham. *Christopher Jones,* Princess Ave., Western Park, Flintshire, North Wales. *J. Kirk,* Brookside, Brightons, Falkirk, Scotland. *J. Lemmon,* George Rd., Farncombe, Godalming, Surrey. *Anthony Lockwood,* Middleton Drive, Pinner, Middx. *Peter Marriott,* Westbourne Road, Blackheath, Birmingham. *A. Miles,* Pearsall Road, Longwell Green, Nr. Bristol, Glos. *A. Mitchell,* Church Road, Frampton, Cotterell, Bristol. *S. Nowlan,* Fairfield Road, Taunton, Somerset. *Robert Pascall,* Plympton, South Devon. *C. Penpraze,* High Cross Street, St. Austell, Cornwall. *Giles Phillips,* Elm Farm, Nr. Burford, Oxon. *C. Pope,* Summerdown Lane, East Dean, Eastbourne. *Adrian Reeves,* Cranmer Close, Eastcote, Ruislip, Middx. *C. P. Reynolds,* Wulfstan Way, Cambridge. *S. H. Rice,* Park Rd., Bromley, Kent. *M. Ricketts,* Allardene, Evesham, Worcs. *C. Rose,* Campfield Rd., St. Albans, Herts. *D. Rowell,* Bull Lane, Ketton, Stamford, Lincs. *M. Schendel,* Drury Lane, Buckley, Flintshire, North Wales. *D. Simpson,* Eastwood Ave., March, Cambs. *A. G. Sliney,* Vernon Ave., Clontarf, Dublin 3, Ireland. *P. Smith,* Foundary Road, Yapton, Nr. Arundel, Sussex. *I. Stamworth,* Ambleside Road, Mereside, Blackpool. *G. Swan,* Heriot Row, Edinburgh, Scotland. *M. Thomas,* North Barcombe Road, Childwall, Liverpool 16. *Jim Thorburn,* Balfern Ardwall Rd., Dumfriesshire, Scotland. *N. Thorp,* Church Crescent, Swallington, Nr. Leeds. *R. Tubby,* Chestnut Ave., Oulton Broad, Lowestoft, Suffolk. *Keith Turner,* Cleve Ave., Toton, Baston, Nottingham. *Terry Turner,* Cornwall Ave., Blackpool, Lancs.

WANTS

• Pre-war Trains and other toys or relevant data sought by enthusiast. Butler-Edwards, 1 Chesham Crescent, S.E.20. Please will you quote at your convenience.

• Meccano E20R (S) Electric motor in good working order. Maynard, High Walls, West Winterslow, Salisbury, Wiltshire.

• Any obsolete Meccano parts, especially 129 rack segment. E.D., Barklay, 28 Roseneath Road, London, S.W.11.

• Wanted—Special aeroplane constructor outfits/parts—Stuart Turner Stationary Steam Engine (or other good make). Obsolete parts and Literature. Pat Mooney, Rathbawn Road, Castlebar, Co. Mayo, Ireland.

• Early pre-war and early post-war English Dinky toys models. Monsieur Jean-Jaques Moreaux, 18 Bis rue de Bellefond, Paris IX°, France.

• Renault 4L Dinky model. Pitman, 2 Lime Close, Ware, Herts.

• Wish to buy M.M. January, 1942 to September, 1959, inclusive; quote price including postage. Dr. A. Grinnaert, 28 Rue Gustave-Delory, Vendin-le-Vieli (P. de C.), France.

• Scalextric electric lap-recorder, must be in good condition:—O. Palmer, 48 Salisbury Street, Calverly, Pudsey, Yorks.

• Wanted:—Pre-war 0-gauge electric or clockwork.—Robinson, 3 Dennis Parade, London, N.14.

• Pre-war Dinky Trains and Tootsiery cars:—Gilmour, 16 Great Lawn, Ongar, Essex.

• Model soldiers, metal only; state price, condition, etc.:—Aldcroft, 23 Mersey View, Waterloo, Liverpool 22.

• Obsolete Dinky toys, etc., highest prices, single or collections:—Pinnock, 6 Stream Farm Close, Lower Bourne, Farnham, Surrey.

• English, Canadian, and American coins wanted. Top prices for crowns and cased sets; £2 for 1953 set in plastic envelope:—D. H. Woodberry, 104 Risca Road, Roderstone, Monmouthshire.

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• Meccano parts, cabinet, reasonable price:—John France, 19 Anniesdale Avenue, Stepps, Glasgow E.3., Scotland.

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STAMPS news

by F.E.Metcalfe

The Great Siege

Last month I referred to an interesting set which Malta was to issue on September 1st; I would now like to mention the issue again, for not only are the stamps exceptional, but they mark one of the great events in world history. This was the great siege of Malta in the 14th century by the then all-powerful Turks. Some years ago, while on business in the capital of Turkey, Ankara, I was told that this was as far as Byzantium stretched to the East. In those days the Turks were a powerful nation, whose territories pushed right into the heart of Europe. This interested me, because when visiting Hungary not long before that time, I was taken to a small town called Gyor, which is reputed to be the farthest point West that the Turks reached. If the Turks had succeeded in capturing Malta, the whole history of the world could well have been radically altered; the island's geographical position in the centre of the Mediterranean, made it a key centre of power. It is unfortunate that only one stamp from the set can be illustrated here. If you buy one, be sure to read something of the fascinating story which the stamps are commemorating.

Floral Stamps

I cannot say that I share the Canadian Postmaster General's love for the stamp designs of his country. Yet they remain undisputably popular, especially in Great Britain. So the eighth of the series was snapped up just as quickly as the other seven had been. All of them were issued in honour of the various Canadian provinces. The one illustrated is in honour of Prince Edward Island; the flower is commonly called a Lady's Slipper or Moccasin flower; experts know it as Cyprepedium acaule. Two more stamps will be issued later, and the whole ten will certainly make an interesting set. The used ones will only cost a few coppers, but be sure to pick well cancelled stamps; those with heavy postmarks will not be worth mounting.

The New Season

In the old days, before stamp collecting was taken so seriously, many addicts used to forget about their hobby in the summer months. Nowadays stamp-collecting is a pastime all the year round. But even so the appearance of new editions of the catalogues undoubtedly provides a boost. Gibbons Part 3 appeared in August, and covers America, Asia and Africa. Due to ever-rising print costs the price has unfortunately gone up to 45 shillings, but it is still a bargain. There is of course the Gibbons simplified, which covers the whole of the world, in a straightforward way, and as always is a wonderful bargain. If you are interested in Commonwealth stamps, there is the Commonwealth QE II catalogue; this year's edition is larger than ever, and for those interested, there is a section on the newer British stamps. There are countless varieties listed, some of which you may have without actually realising it.

Advance Australia

The Australians are a very critical race, at least as far as their postage stamps are concerned. Although in my opinion some of their sets are very fine indeed, you still find people grumbling down under. If, however, you are thinking of taking up a country, where there are plenty of new stamps which are easily obtainable, then Australia is the place for you. The Australian P.O. always plays very fair with collectors; they have no fancy varieties which are only obtainable at a big premium. Next year Australia changes its currency; this means an entirely new issue of stamps, and any mint that you buy meanwhile will become obsolete. All in all I strongly recommend Australian stamps particularly for those who do not want to spend a lot on the hobby, but are interested in the study of their stamps. No other stamps being issued today are more suitable.

The tip of the month

There is one tiny country, which I referred to recently, Gambia, which has always been popular with collectors. Since it changed its political status, it has issued two sets, and they have not diminished in quality, (let us hope they do not overdo the issue of new stamps). Stamps belonging to the "Bird" issue of 1963 and those which were overprinted in February of this year should be snapped up when they come your way. They will more than pay for their keep.

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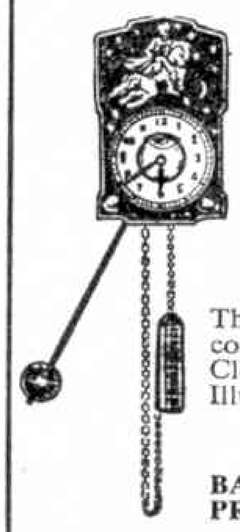

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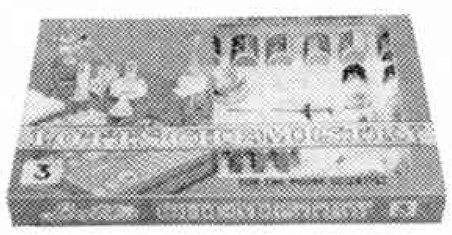

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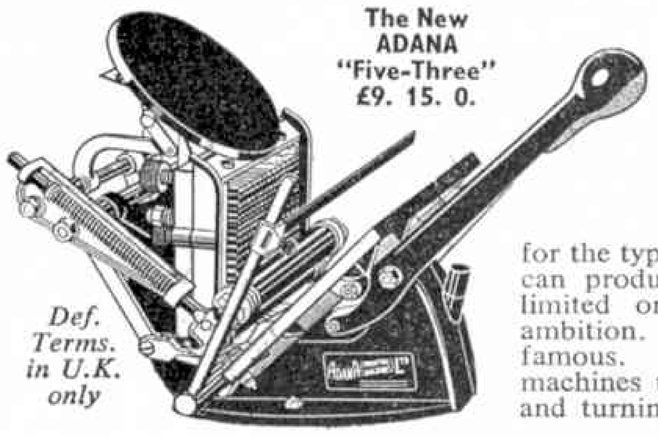

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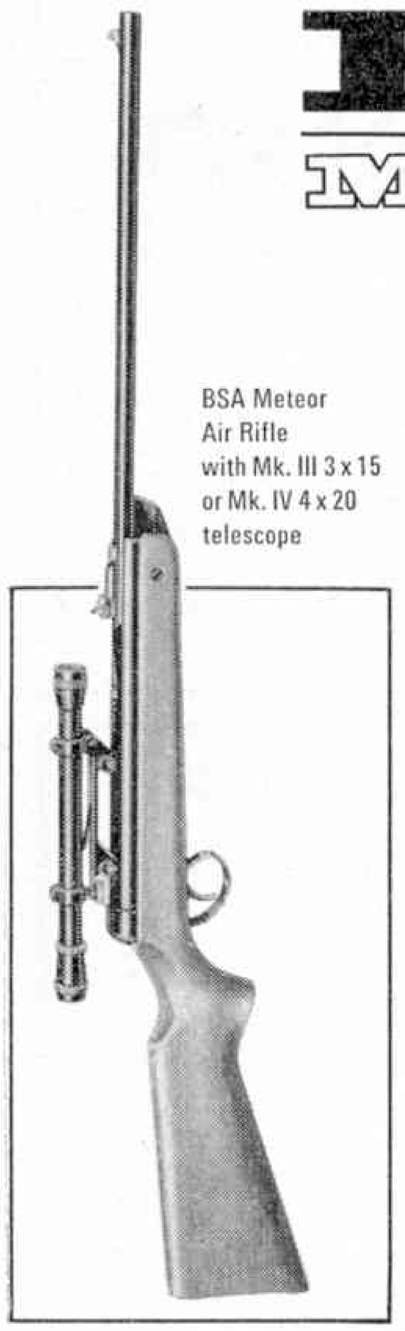

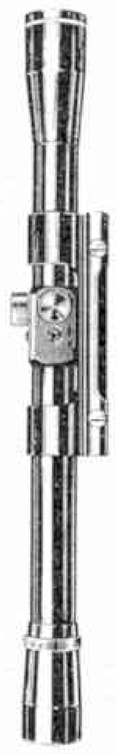

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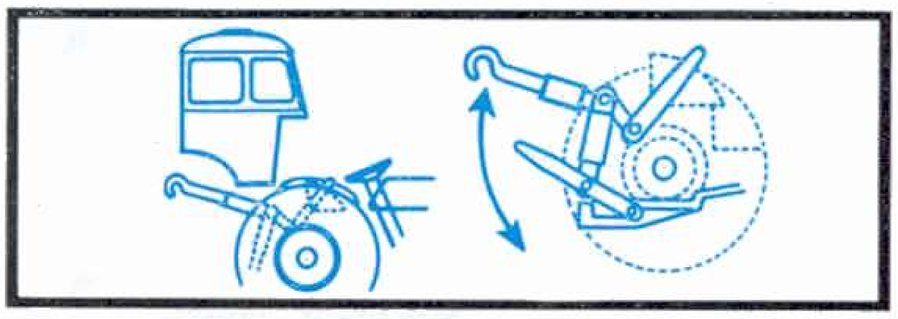

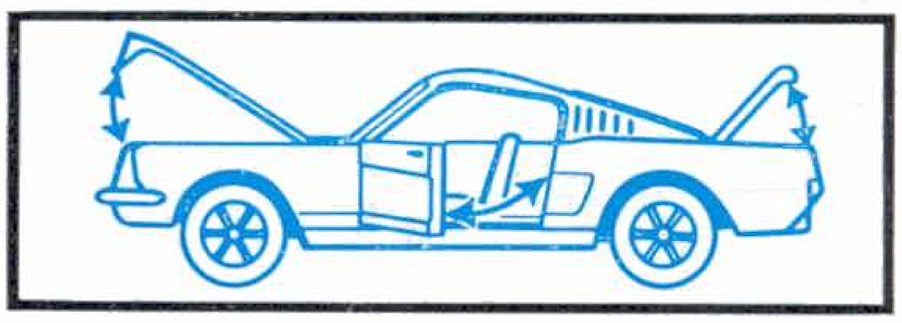

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Published by Thomas Skinner & Co. (Publishers) Ltd., St. Alphage House, Fore St. London, E.C.2. Printed by James Cond Ltd., Charlotte St., Birmingham 3